

**THE GERMAN UNIVERSITIES
AND UNIVERSITY STUDY**

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PREFACE.

TO

THE ENGLISH EDITION

IN this book Professor Paulsen, who is the greatest living authority upon the history of higher education in German-speaking lands, describes the development of the German universities, their structure, their function, their relation to the life of the community and to the central government of the state. Of these institutions no other work gives a picture so comprehensive, candid, and exact. From what origins and through what vicissitudes of restraint and freedom the German universities have risen to their present position; the part which they have played in the making of the German nation, in the furtherance of knowledge, and in defence of the liberty of thought; the spirit and methods of their teaching; the conditions and rules of their student-life; the scope and interaction of their faculties; the paradox of their intellectual independence and subordination to state control—all these things are laid before the reader by a master's hand. Professor Paulsen thus admits us to a knowledge of the inner working of institutions to which Germany owes no small part of her present greatness and to whose investigations the whole world of learning stands in debt. One of the most famous of German professors was called Preceptor Germaniæ. Of universities which have counted among their teachers such men as Kant, Fichte, and Hegel among philosophers; Bopp and the brothers Jacob and Wilhelm Grimm among philologists; Niebuhr, Ranke, and Mommsen among historians; Liebig, Hermann, and Virchow among students of physical science, it is not too much to say that they have been *preceptores orbis terrarum*.

The German universities owe to three chief causes their scientific distinction and the place which they hold in the thoughts of the German people. They have been served by a succession of very eminent teachers, many of them in their day the intellectual leaders of the nation, who have been at one and the same time thinkers, researchers, and instructors, and whose work has brought them into direct contact with the picked youth of each generation during its most impressionable years. In the second place, the universities have received from their governments financial aid on a scale which has enabled them to seize new opportunities for the systematic extension of knowledge—aid which has been the outcome of a firm belief that it is false economy to stint public expenditure upon the intellectual activities of the state. Thirdly, they have won their way to a position of intellectual freedom which, in the judgment of most observers, guarantees in all essentials their independence as scientific institutions, in spite of the control exercised by government upon the choice of their professors, upon the expenditure of their funds, and upon the various examinations, whether qualifying for admission to the universities or for entrance to the learned professions. Each of these factors has been indispensable to their success. The personality of their teachers has secured for the universities learning, influence, prestige. The liberality of the governments has secured for them opportunities of persistent and fruitful research. But neither research nor teaching would have flourished had not the state come to realize that without freedom and independence there can be no freshness or reality of intellectual life.

The secret of the greatness of all institutions lies not in the form of their organization, or in their legal status, or in their financial resources, though of course each of these has an important bearing upon their efficiency and well-being, but in the spirit of their work and in an unwritten tradition of public service. It is the inner tradition of German university life, the spirit which animates and controls them, that most deserves study and excites our admiration. The German universities have become strong and great through untiring devotion to science, through belief in the power of

education, through resolute defence of intellectual freedom, and through a sense of personal obligation to the claims of the state.

Though written primarily for German readers, Professor Paulsen's work, as now translated, will prove of practical value to a far wider circle. International relationships in university study are closer to-day than at any previous time since the beginning of the sixteenth century. Any British or American student who thinks of becoming, for a time, a member of a German university will find this book of service to him. Moreover in Great Britain, as in America, the universities are passing through a period of rapid development, by reason of the upthrust of new social forces and in response to the growing need for science in administration, in industry, and in the regulation of urban and rural life. At no earlier period in our educational history has German experience in organizing intellectual activities had so close a bearing upon our needs. We find that what has long been going forward in the German universities and technical high schools throws light upon the place of scientific research in industrial enterprise and in national well-being. We see that German experience may guide us, by way both of warning and example, as to the right relationship between the universities and the government or other public bodies from which most of the former receive an increasing proportion of their resources. As soon as we began to consider the true cost of developing the intellectual powers of the nation we realized that in the bold application of public funds to higher education and to free scientific investigation it was Germany that had led the way. Prussia set the example, in the darkest hour of her fortunes, when, after her defeat by Napoleon, she founded the University of Berlin, believing, in the words of Wilhelm von Humboldt, that "the state, like the private citizen, always acts wisely when in time of misfortune it uses its efforts to establish something looking to future good." And out of the wealth which Germany now enjoys—wealth due in great measure, it will be remembered, to the labours of men of science and to the economic effects of the national unity which the universities did much to promote—she

spends with prudent liberality upon the maintenance and development of the scientific resources which have served her well.

Except in some incidental references Professor Paulsen does not undertake in this book a comparative study of the organization and work of the German and British universities. Such a task would be one of great difficulty, if only for the reason that (even without taking into account the vigorous university life of Wales, Scotland, or Ireland) our university system is composite, while the German is in the main homogeneous. So far as internal organization is concerned there is no such difference between the University of Berlin and the University of Göttingen as between the Universities of Oxford and Cambridge on the one hand and the Universities of London or Manchester or Liverpool or Birmingham, on the other.

If we ask what are the notes of difference between the English and the German universities the answer does not lie simply in their relation to government, or in collegiate organization, or in the comparative importance of professorial and tutorial teaching, or in the influence of examinations on academic study. The German universities are state institutions, founded, maintained, and (with important limitations imposed by custom) administered by government. But, though our practice is to have much less direct state interference in academic appointments, it would be inexact to describe the English universities as autonomous corporations with which the state has no concern. Oxford and Cambridge and their constituent colleges do their work under statutes approved by parliament, and parliament might at any time, if it so pleased, decide to extend its jurisdiction over their affairs. To almost all the other English universities the state makes an annual money grant, and by means of periodical inspection assures itself of the right expenditure of the money so given. Again, the German universities are residential, but not collegiate. But it would be inaccurate to describe the whole university system of England as collegiate

in its organization. Our new universities approximate rather to the German than to the older English type. Again, in the German universities the professors, grouped in faculties, are the controlling force in the actual work of instruction. But the same is true of the majority of English universities, and true also at Oxford and Cambridge as regards some important departments of academic work. Again, in the German universities academic examinations play a smaller part than in the English, but on the other hand the state examinations for admission to the civil service and to the professions overshadow many a German student's life and even affect his choice of studies to a degree which is not yet felt in England.

The essential difference between the German and the English universities lies rather in spirit and in intellectual outlook than in forms of organization. Three points stand out in special contrast. First, the German student feels less allegiance than the English to a particular university. During his student life he is apt to migrate from one university to another. The English student, as a rule, completes his undergraduate studies at the university in which he began them. Secondly, the German university has inherited a larger measure of the spirit of scientific investigation than, in spite of the immense change which has come over this country during the last thirty years, has yet descended on the English. The German nation has been taught to believe in science. The English nation, which has produced so many great discoverers and experimentalists, is nevertheless only just beginning to realize its importance. But the different feeling towards scientific investigation which characterizes the German and the English universities is also due to some extent to a difference in the national ideals of culture. In spite of the stress laid upon "allgemeine Bildung" in the higher schools of Germany the German is by habit of mind more of a specialist than the Englishman. Specialism has more honour and reward in Germany than in England. For good and for evil (and neither side of the account should be forgotten) the expert counts for more with them than with us. German administration excels in thrifty, expert control. But

the ordinary man has in consequence less opportunity of bearing a responsible part in the direction of affairs. Each country has the defects of its qualities and enjoys the advantages which are the result of its limitations. England may be from some points of view a country of amateurs, but it is also a land of level-headed good-sense. Thirdly, though the German student has no deeper feeling of patriotism than the Englishman, he has a stronger sense of his direct obligation to the state. He feels it through the tradition of his country; through the wider scope of the civil service, which there includes the profession of teaching in universities and in all grades of schools; and especially through the duty of military service, the personal discipline of which compensates, in Professor Paulsen's judgment, for the abridgment and disturbance entailed by it in the academic course.

These are the chief points of contrast. But there are other significant differences in the university organization of England and Germany. For good and evil the German system of higher secondary education is more standardized than ours. This affects the preliminary stages of university work. The average German student can be assumed to have learned at school, before entering upon his academic studies, a certain range of specified subjects. Our English secondary schools are much less uniform in their output and much more tolerant of cheerful and healthy-minded ignorance. The German system makes more thrifty use of inferior intellectual material. On the other hand it is so highly organized that it leaves too little scope for brilliant individuality, and some plodding and conscientious minds appear to be prematurely tired by the pressure of its demands. Secondly, the technical high schools in Germany have been organized apart from the universities, a separation which Professor Paulsen regrets, but regards as not easy to be reversed. In England, on the contrary, the provision of higher technological teaching has been made, with a few conspicuous exceptions, an integral part of university work. It is too soon to judge the relative merits of the two systems. The Germans have had a long start in this branch of education, and are consequently

in a more advanced stage in regard to most departments of higher technological teaching than we are. When the German technical high schools rose to importance it was social and academic tradition that brought about a separation between higher technology and the older university studies. In England, owing to the newness and more plastic state of many of our Universities, this separation was avoided. In any consideration of the subject, however, it must not be forgotten that the separate organization of higher technological teaching in Germany put its friends on their mettle. And it secured, what the traditional environment of the German universities would have failed to encourage, a practical bent in their work.

There are other points of difference. Some of our great municipalities, as, for example, the London County Council and the City Councils of Manchester, Liverpool, Birmingham, Leeds, and Sheffield, have taken an important part in the development of our new university institutions. To this action, which recalls municipal zeal in the establishment of universities at the time of the Renaissance, there is no exact parallel in the academic development of modern Germany. Again, larger powers of self-government in matters of property and finance are given to the English than to the German universities. This has a double result. The English universities have the stronger sense of distinct corporate unity, but more academic time is devoted in them to matters of business than is the case in Germany, a state of things not favourable to concentration of mind in scientific investigation, though conducive to a knowledge of human nature. Again, at Oxford and Cambridge a special form of college life and of college tradition has been preserved. College interests or duties absorb, it is true, much energy which might otherwise have gone to strengthen the intellectual vigour of the university as a whole. And college standards of living raise the cost of the university course at Oxford and Cambridge for the majority of undergraduates, though not by any means for all. But, on the other hand, so great is the value of college life in bringing together men of many different kinds in free intercourse on terms of great

equality that few who realize its benefits would wish it to lose its place as a great educating factor in one department of English university life.

The reader of Professor Paulsen's book will observe that many Germans, while justly proud of the greatness and intellectual vigour of their universities, wish to see certain changes in the conditions and organization of their work. They desire to secure more freedom of individual study in the higher classes of their secondary schools. They are conscious of the darker side of the influence of state examinations on academic study and on the intellectual development of less usual types of mind. They regret the separation of the technical high schools from the universities. They feel the need for more scholarships, to enable poor men to go through the university course and to enter a liberal profession. They would like to see something like a tutorial system organized at the universities as a supplement to professorial teaching. They would welcome the establishment of halls of residence at the universities as an alternative to isolated lodgings. And they realize the tendency of a highly organized system of state-aided secondary and higher education to overcrowd the professions.

We in England, on the other hand, feel with increasing force how much hampered we are by the lack of a high intellectual standard in many of our weaker secondary schools. We realize that we are still far behind Germany in real appreciation of the fruitfulness of disinterested but systematic research and of the value of scientific precision in the administration of public affairs. In spite of much reason for encouragement we suspect that the day may yet be distant when the state will vigorously take in hand the development of the higher intellectual resources of the nation by the adequate encouragement of research and by making the calling of a teacher in our local secondary schools reasonably attractive to men of culture and practised skill. . .

It has been said that in education the truth lies somewhere between the German system and the English. Each nation

has much to learn from the other's experience and point of view. Half-consciously and on each side with some reluctance to admit the fact, the two nations are slowly moving from different points towards a greater similarity in educational aims. Each will gain by endeavouring to get a sympathetic insight into the other's intellectual aspirations and social needs. And, in the sphere of higher education, no one has done more to promote this good understanding than Professor Paulsen himself.

MICHAEL E. SADLER.

May, 1906.

THE GERMAN UNIVERSITIES

Wer für die Welt etwas thun will,
muss sich mit ihr nicht einlassen.
GOTT LIEB.

THE GERMAN UNIVERSITIES

INTRODUCTION

GENERAL CHARACTER OF GERMAN UNIVERSITIES

THE various kinds of modern universities may all be traced to three original types: the English, the French, and the German.

Of these the English type, represented by the ancient and honorable universities of Oxford and Cambridge, is the oldest. Because England is the most conservative of the European countries, clinging tenaciously to its ancient traditions, the original form of the medieval university has been there more faithfully preserved than elsewhere. From England the type was transplanted to North America. In both these countries a university is now an autonomous corporation with whose internal management the state has nothing to do. It is a self-governing institution, and, by reason of its endowments, self-supporting. The customs still prevailing are essentially similar to those of medieval times. Teachers and students live together in the *colleges* and *halls* in a sort of monastical society. The instruction is in form as well as in content also like that of the ancient university, especially in its principal department, the *facultas artium*. The general aim is to give a gentleman that broader and deeper culture with which custom demands he should be equipped. Specifically scientific research and professional training are regarded as lying quite outside of a university's legitimate scope. The course of study includes, primarily, such matters of general culture as the languages, history, mathematics, the natural sciences, and philosophy. The method of instruction is scholastic. In many instances it is carried on entirely by tutors. Theology alone has always had an equal place, in England, with the more general subjects,

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and more recently the study of law, preceding the practical training in the "inns of court," has received larger recognition. The medical sciences still find a home in the great hospitals.

The French type has diverged most widely from its original. Together with many other historical institutions in France, the decrepit universities were destroyed by the Revolution, to make room for a newer and larger structure built according to a geometric plan. But the actual period of reconstruction did not begin until the Napoleonic era, when the old universities were replaced by separate technical schools established by the state for professions which required scientific training, particularly for law and medicine. Along with these the philosophical faculty, divided into the *facultés des lettres* and *des sciences*, continued to eke out an exceedingly modest existence. The old union of several faculties into a university was abandoned, and the very name itself would have disappeared had it not been preserved in the *Université de France*. As thus used, however, the term has an entirely new meaning; it describes a central governing body which controls the entire national educational system, from the elementary schools to the highest professional schools. The faculties have ever since been state institutions for technical training in certain professions. The instructors are government officials and as such superintend the civil-service examinations. Neither scientific research nor general theoretical instruction is really looked upon as part of their duty. The former is the especial function of the Academy, the latter that of the preparatory schools. It was not until the period of the Third Republic that the reunion of the faculties into universities with certain corporate rights and functions, as well as a revival of interest in the theoretical branches became a matter of concern with the government. Of course, the amalgamation of all the faculties into complete universities was not possible. Nor can the centralization of intellectual life at Paris be annulled.

The German type, indigenous to Germany and the neighboring countries which are dominated by its influence (Austria, Switzerland, the Netherlands, as well as the Scandinavian north and Russia), stands midway between the English and

the French types, at least so far as outward form is concerned. It has retained more of its original character than the French, but has yielded more to the demands of modern times than the English. The German university is, like the French, a state institution. It is established and supported by the government and under its control. But it retains some not unimportant features of the original corporative character. It still possesses a certain degree of autonomy. It elects its own officers, the rector, the senate, and the deans, and also exercises a considerable influence in the appointment of professors. By its power to confer the doctor's degree and appoint the *private docents*¹ the university determines the circle from which the members of the faculty are usually drawn. In addition to this, it receives from the government the right to nominate candidates for the different chairs. Indeed, we may say that in its general structure the German university has best preserved its original form as an institution of learning. It has retained the four faculties as active teaching bodies, whereas in England both university instruction and life have been for the most part absorbed by the individual colleges. On the other hand, the union of faculties into the living organism of a university, as a centralized institution for all the learned professions, is also preserved, in contrast to the course of development followed in France.

The peculiar characteristic of the German university as a laboratory for scientific research as well as a school of instruction in all the higher branches of general and professional knowledge becomes at once apparent when the internal organization of the institution is considered. Like the English universities, it offers a broad and deep course of instruction in the arts and sciences. This is the special province of the philosophical faculty. Like the French *facultés*, it offers technical instruction for the learned professions in that it trains the clergy, judges and higher officers of administration, physicians, and high-school teachers. But it is, in addition, what the English and French universities are not, namely, the most important seat of scientific work in Germany, and the nursery of

¹ We shall use the term "private docent" for the German *Privat-docent* in this translation.

scientific investigation. According to the German idea, the university professor is both a teacher and a scientific investigator, and such emphasis is laid upon the latter function that one ought rather to say that in Germany the scientific investigators are also the instructors of the academic youth. * This statement, of course, implies that such academic instruction is, primarily, purely theoretical and scientific. The important thing is not the student's preparation for a practical calling, but his introduction into scientific knowledge and research.

This intimate union of investigation and instruction gives the German university its peculiar character. There are excellent scholars at Oxford and Cambridge, but no one would speak of them as the chief representatives of English scientific achievement. Many of England's most distinguished scholars, men like Darwin, Spencer, Grote, the two Mills, Carlyle, Macaulay, Gibbon, Bentham, Ricardo, Hume, Locke, Shaftesbury, Hobbes, and Bacon, were not connected with the universities at all, and of many of them it could be said that they would have been altogether impossible at an English university. But even the English professors are not, in the German sense, the instructors of the students. It is true, they deliver scientific lectures, but the real instruction is usually left to fellows and tutors. In France, similarly, the scientific investigators, the great scholars, belong to the Academy, to the *Institut de France*. They are also, perhaps, members of the *Collège de France*, or of the *Sorbonne*, and as such they deliver public lectures, which anyone may attend. But they are not, like the German professors, the actual daily teachers of the students. Nor is it expected, on the other hand, that the members of the different faculties in France, especially in the provinces, should be independent scientific investigators.

* In Germany, on the other hand, it is taken for granted that all university professors are investigators and scholars, and that all investigators and scholars are teachers in universities. It is true, there have been prominent scholars who were not university professors, men like Wilhelm and Alexander von Humboldt, and we find many names distinguished for scholarship among teachers in the German gymnasias. It is likewise true that there are among the professors not only men who never

do any important scholarly work, but men whose sole ambition is to be good teachers. But all these cases are exceptions. The rule is that the professor is also a scholar. Whenever the name of a scholar is mentioned in Germany, the question is at once asked, with what university is he connected? And in case he does not occupy a chair in such an institution, it may safely be assumed that he himself regards this fact as a slight. Whenever, on the other hand, a professor is spoken of, the question naturally arises, what has he written, what contribution has he made to human knowledge?

These conditions have an exceedingly important bearing upon our intellectual life.

The fact that he is always an academic teacher fixes the German scholar's place in the life of our people. Our thinkers and investigators not only write books for us, but are our personal instructors, men whom we meet face to face. Men like Fichte, Schelling, Hegel, and Schleiermacher influenced their times primarily as academic teachers; their influence as authors was not so very great. A large portion of their writings was published after their death, from the syllabi of their lectures or the notes taken by their pupils. Kant and Christian Wolff were likewise university professors. So were the great philologists Heyne, F. A. Wolf, G. Hermann, and Boeckh. The influence of these men was felt especially through their personal activity as teachers; and their pupils, who became teachers in their turn in the higher institutions of learning, diffused the spirit and method of these men among the youth of the land. Think of the influence which historians like Ranke and Waitz exerted through their seminars. Call to mind our natural scientists and mathematicians, Gauss, Liebig, Helmholtz, Kirchhoff, and Weierstrass. It may safely be said that if the contributions of the university professors were expunged from the history of German learning, the residue would not be very large. It must also be added that several of our illustrious poets—Uhland and Rückert, Bürger and Schiller, Gellert and Haller—were university professors. The influence of the professor upon our legal and political development has also been highly significant. Witness, for example, the names of Pufendorf and Thomasius, Savigny and Feuerbach, Niebuhr

and Treitschke. And how much is implied in the fact that both Luther and Melancthon were university professors!

It cannot be doubted that this condition is a fruitful one for all concerned. The German youths who come into direct contact with the intellectual leaders of the people at the universities thus receive their deepest and most lasting impressions. In German biographies the years spent at the university always play an important rôle, and it not seldom happens that the influence of a professor determines the intellectual trend of a student's life. The relation is a pleasant and fruitful one, on the other hand, for the scholars and investigators themselves. The constant contact with the young enables them to prolong their own youth. The direct, personal communication of thought in the lecture room receives a stimulus and animation from the silent, but nevertheless appreciable reaction of the auditor which is never felt by the solitary author. The hearer's presence serves, moreover, to fix the teacher's attention always upon the essential and universal. The inclination to philosophize, the trend toward generalizations of which the German thinker is accused, is assuredly connected with the fact that in Germany, more than anywhere else, knowledge is directly produced for the purpose of oral instruction.

But there is another side to this question. The pursuit of learning according to university traditions readily displays less pleasing phases of our intellectual life. It gives rise, for example, to a tendency to literary overproduction, to scholasticism, to clannishness, and to a contempt for those who are outside of the charmed circle. Such treatment is bitterly resented by the outsiders and often leads them into vehement abuse of those who belong to the "guild," a practice familiar enough to readers of Schopenhauer and Dühring. It is certainly more difficult for a scholar to succeed outside of university circles in Germany than in England or France. Moreover, if intellectual work outside of the universities could enjoy a larger measure of prosperity, it would serve as a very valuable corrective for our distinctively academic scholarship by supplying it with a more unbiased viewpoint for many things, as well as with a more reliable standard of judgment.

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But certain difficulties grow out of this relation for university instruction also. This is especially true with regard to professional training, which is often neglected for the purely academic treatment, in which the interests of research are alone kept in view. This difficulty is felt just now by all the faculties, but more especially by those of philosophy and medicine. This will be referred to again somewhat later.

However, the German people have not, on the whole, any cause for dissatisfaction with the conditions described. In Germany, more than elsewhere, learning is deeply cherished by the nation, and this is due entirely to the happy circumstance that here the great men of science have always been the personal instructors of our youth. And the universities themselves have every reason to desire a continuation of things as they are. The secret of their power lies in their ability to attract and hold the leading spirits of the land. And so long as they can do that they will maintain the position which they have won for themselves in the life of our people.

Some changes have, necessarily, taken place in the course of time. The position which the universities occupied during the first half of the nineteenth century they owed to the fact that, apart from science and literature, the German people had no unifying national interests. And because participation in political life was so long repressed, and economic success in the competitive markets of the world made so difficult, it was natural that the energies of the people should be turned upon the inner life, and that the intellectual world should furnish the compensation for the denials experienced in the material. It thus came to pass, in the European family of nations, that the Germans were called upon to play the part of "a people of thinkers and poets"; indeed, it was all that was left to them. Germany and France seemed to have exchanged the places which the medieval saying had assigned them: the Italians have the *sacerdotium*, the Germans the *imperium*, and the French the *studium*.

But a change occurred about a generation ago. The German people, for so long merely a passive object in European politics, has again become an active subject. German unity to-day rests upon other and stronger grounds than the universities. And

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the change will make itself felt in more than one direction. In the new empire the universities can no longer be the actual centers of the national life as was in a sense the case in the days of the old *Bundestag* (as witness the careful and painful attention which that august body gave them). Furthermore, men of talent now find other paths to conspicuous positions open to them besides the academic career, such as parliament, the world of commerce, the colonies. Energy that can make itself felt finds ample room for activity and prospect of influence and profit.

But even amid these changed conditions the universities have maintained their prominence in our national economy. They continue to be important supporters of German unity. The constant interchange of both professors and students between the several states of the empire helps materially to keep alive the feeling of national solidarity in the separate parts of the realm. And it is to be hoped that the German university will always cherish her reputation as the main-stay of German learning. That reputation will assuredly follow her so long as she remains true to her traditions and keeps alive the sincere spirit which rejoices in knowledge for the sake of knowledge, loves the truth and is faithful to duty, thereby rising above the sordid sense of loss or gain.

In the meantime the German universities have also succeeded in winning recognition abroad. Young disciples of science from all the world now come to them as once the Germans made the pilgrimage to Paris and Italy; and foreign countries imitate their methods. France has already begun to combine her faculties into organic wholes according to the German pattern. Even in England, after experience with the more or less independent colleges, the effort is now being made to reorganize university instruction. In this effort to unify scientific labor and instruction several of the more prominent American universities have, perhaps, been the most successful. It is to be noted that the number of American scholars who have studied and won their doctorates in Germany is especially large. To this fact also is due, in no small measure the feeling of kinship which binds us to the great and youthfully vigorous nation on the other side of the ocean. The American Ambas-

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vador, Mr. Andrew D. White, who was himself a student of a German university and later a distinguished teacher at an American university, in a public address once attributed much of the fame which Germany enjoys in America to the German universities. It was, he said, principally due to them that Germany was looked upon in the United States as a kind of second mother-country.

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BOOK I

AN OUTLINE OF THE HISTORICAL DEVELOPMENT

CHAPTER I

THE GERMAN UNIVERSITIES DURING THE MIDDLE AGES ¹

1. *Origin.* Universities came into existence in France and Italy during the earlier portion of the second half of the Middle Ages. During the first half of this period men looked backward to Christianity and the ancient world, but at the end of the eleventh century they began to look forward. A mighty intellectual revolution occurred about that time. The crusades had brought the oriental peoples into the closest contact not only with each other, but with the occidental world as well, and the religion and civilization of the Arabians were thereby placed within the European intellectual horizon. In knighthood there appeared a new patron of secular literature and culture, and in the new Franciscan and Dominican orders, a kind of ecclesiastical intellectual knighthood was established to which most of the great names in the rapidly developing new theology and philosophy belonged. Everywhere the desire for knowledge began to make itself felt, and, above all, the attempt was now made to understand and rationalize the faith which the new peoples had at first merely passively accepted, for the purpose of assimilating it more thoroughly and consciously. At the same time the principal works of the Aristotelian philosophy became known. Thus arose the problem of harmonizing faith with knowledge, the doctrines of the Church with philosophy, in order to bring them to a consistent unity. The solution of the problem was found in the great systems of the thirteenth century.

¹ G. Kaufmann's thorough work, *Geschichte der deutschen Universitäten im Mittelalter*, supplies, in its second volume, complete information concerning the subject matter of this chapter. For the development of the entire university system of the Middle Ages the works of Denifle and Rashdall are of first importance.

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This new intellectual world produced the universities as its organ or support. Paris, the first great university of the western world, became the seat of the new theological-philosophical speculations. From Paris—*ex diluvio scientiarum studii Parisiensis*—the German universities especially take their descent. But the independently founded universities of Italy, especially Bologna, originally a law school, were not without influence upon them.

While the oldest universities of France and Italy, as well as of Spain and England, date back to the thirteenth, and even as far back as the twelfth century, the oldest German institutions do not go beyond the second half of the fourteenth century. Prague and Vienna were the first foundations. The former was established in 1348 by the house of Luxemburg, the latter in 1365 by the house of Hapsburg. Both were located on the eastern border of the German sphere of culture, manifestly because in that region the most extensive independent territorial jurisdictions had been built up, and, probably, because Paris, with which the old ecclesiastical schools along the Rhine, notably Cologne, already sustained intimate relations, was readily accessible to the west. Toward the end of the century the west followed with the universities of Heidelberg (1385) and Cologne (1388), and Middle Germany with Erfurt (1392), the two last named being municipal foundations. The establishment of these three universities was in part due to the disintegration of the university of Paris by the great ecclesiastical schism. Cologne had long been one of the most important seats of ecclesiastical learning. Here, in the Dominican school, Albertus Magnus and Thomas Aquinas had taught, while Duns Scotus had given instruction in that of the Minorites. Erfurt also had an organized school long before 1392, as Denifle has shown, which soon laid claim to the title of *studium generale*. By way of compensation for the loss of the university of Prague—lost to German culture by reason of the Hussite disorders—the dukes of Saxony founded a university in Leipzig (1409) for the numerous masters and scholars who had immigrated to that city. In 1419 the municipality of Rostock, in cooperation with the rulers, established the last university founded during this period.

With two exceptions the seven universities of this first period are still in existence. Cologne and Erfurt, which at the turn of the fifteenth and sixteenth centuries, stood in the first rank, perished, with the ecclesiastical states to which they belonged, in the storm of the French revolution, so destructive to many of the old universities. Cologne was abolished in 1794, Erfurt in 1816.

A second foundation period began with the rise of the humanistic movement. It witnessed the establishment of no less than nine new German universities: Greifswald (1456), Freiburg (1460), Basel (1460), Ingolstadt (1472), Treves (1472), Mainz (1477), Tübingen (1477), Wittenberg (1502), and Frankfort-on-the-Oder (1506). With the exception of Greifswald and Basel these were all government foundations. The three first-named and Tübingen are still in existence at their ancient seats. Treves and Mainz, the two archiepiscopal universities, which were never of great importance, succumbed toward the end of the eighteenth century, with the ecclesiastical states to which they belonged. The remaining three were either removed to other places or were combined with other institutions, about the beginning of the nineteenth century. Ingolstadt was removed, first to Landshut (1800), and then to Munich (1826); Wittenberg was combined with Halle (1817), and Frankfort-on-the-Oder with Breslau (1811).

2. *Organization and Regulations.* First, a word or two about the name. Originally the proper designation for a university was *studium generale*. It was so called because, in contrast to the *studium particulare*, or school for the town or province, the university aimed to be a school for the whole of Christendom regardless of national or geographical lines. And, as a matter of fact, the degrees conferred by these universities were everywhere acknowledged and accepted. On the other hand, the name *universitas* described, not the school as a school, but rather the civil corporation of instructors and students which, by means of all sorts of exemptions, had secured for itself the position of a public legal corporation. It was therefore spoken of, for example, as the *universitas magistrorum et scholarium Parisiis existentium*, or the *universitas studii Pragensis*, or *Viennensis*, etc. This designation gradu-

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ally supplanted the other and became, with its modern significance as *universitas litterarum*, the name for the institution of learning as such.

How Founded. Unlike the first French and Italian institutions, the German universities did not originate spontaneously, but were the result of a definite scheme in which, as a rule, the civil and ecclesiastical authorities were both interested. The actual founders were the territorial governments, or perhaps the municipalities. The ruler called the school into being, supplied it with buildings and endowments, and, at the same time, granted the *universitas* certain corporate rights, such as autonomy, jurisdiction over its own members, and exemption from duties and taxes. The next step was to secure recognition from the higher authorities, especially the papal, from whom was procured, for a price, a "bull" which finally sanctioned the establishment and endowment of the university and authorized it to teach, hold examinations, and confer degrees. In this latter arrangement we see clearly the medieval notion of instruction as an ecclesiastical function. Somewhat later it became customary to procure the imperial sanction as well, for the imperial power also had something of the glamour of universality about it, and besides, the view had become prevalent that the Roman law was also the "imperial" law. Freiburg began this practice. The new university thus became a *studium privilegiatum* or "privileged school."

How Organized. The oldest German universities (Prague and Vienna, the former imitated by Leipzig, and Leipzig in turn by Frankfort) adopted the dual organization into "faculties" and "nations" from still older models. To facilitate instruction, the teaching force was divided into four faculties, and for administrative purposes the entire "corporation" was arranged (as at Paris) into four "nations," to one of which each member was assigned according to his nationality. The division into faculties, whose functions were to teach, hold examinations, and confer degrees, was based upon the nature of the instruction to be given. Each faculty elected a dean as its presiding officer. The division into "nations" was made for the purpose of government and jurisdiction. Each "nation" elected a procurator as its chairman. At the head of

the entire university stood the rector, who was elected by the four "nations," which included the masters and scholars. But this organization soon became obsolete. It was supplanted by the faculties, who gradually assumed the functions of administration also. The later foundations, even Heidelberg and Erfurt, simply had the division into faculties. The student bodies at the German universities were not so numerous as those at Bologna or Paris, where many foreigners somewhat above the average age were usually gathered; nor was their feeling of mutual interest ever as intense. A survival of the old corporate unity of teachers and scholars was, however, retained in the custom which allowed the rector to be chosen from the student body, and that even in universities in which the students had never enjoyed the right of suffrage. The practice of conferring this honor upon princes and nobles, matriculated for the purpose, continued in vogue for a long time. By this means the lustre of a great man's fame was reflected upon the university also. Usually, a vice-rector was provided to look after the administration of affairs.

At first everyone belonged to the faculty from which he received the master's or doctor's degree. In fact, the bestowal of the degree signified that the recipient had thereby been made a member of the faculty. But self-preservation soon compelled certain distinctions, at first between the members who actually gave instruction (*magistri actu regentes sc. scholas*) and those who did not; and then also between the older and long active teachers and those who had been but recently admitted (*magistri novelli*). This was especially true of the faculty in *artibus*, with its numerous and frequently changing membership. From this narrower circle of fully privileged members an executive committee, the council (*consilium*), was then appointed, at first merely to prepare the budget of business for the meetings of the full faculty, but afterwards supplanting that body entirely. The corporate faculty of later times is here fore-shadowed.

Attendance. Here, as usual, tradition is very generous with large figures. It tells of thousands and tens of thousands of students contemporaneously at Prague, or Vienna, as well as

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at Paris or Oxford. Nor do the matriculation lists of many of the universities, preserved and recently published, quite disprove these reports. When the matriculation for a given year is found to have been anywhere from five hundred to one thousand, and a residence of from four to six years is assumed for each student, the large figures are easily approximated. But a more careful consideration of possibilities under the circumstances, as well as a critical use of the original sources of information, have led to the adoption of more conservative figures. This is not the place to go into details, but it will not be far from the truth to conclude that the largest German universities (Vienna, perhaps, excepted) hardly counted more than a thousand *supposita* (the technical name for matriculates), and the smaller ones only a couple of hundred, and even less. The majority belonged, as a rule, to the lower faculty of arts (or philosophy, as it has been called since the sixteenth century). Of the three higher faculties, which have, as a rule, only small figures to their credit, the faculty of law seems to have enjoyed the largest attendance, next the theological, and last, and usually quite unimportant, the medical.¹

Customs. Life at a medieval university had little in common with that which prevails at a modern German institution. Primarily the medieval university may be compared to a great boarding school. The teachers and students, at all events those of the faculty of arts, lived together in the university buildings. Each university had one or more *collegia* (the colleges of the English institutions, a term preserved among us in the expression *Colleg* for lectures) and frequently, also, a *pedagogium* for the primary Latin students. If, with increasing attendance, the buildings became inadequate, some of the masters would establish private boarding-houses to supply the deficiency. These were known as *bursen*, a term still preserved in our "Bursche." In these institutions life was

¹A first attempt to get behind the fabulous figures and reach the actual numbers was made by me in an article *Gründung und Lebensordnungen der mittelalterlichen Universität* (in von Sybel's *Historische Zeitschrift*, 1881). A later careful investigation by Fr. Eulenburg, *Die Frequenz der deutschen Universitäten in früherer Zeit* is found in Conrad's *Jahrbücher für Nationalökonomie*, 1897.

governed in monastical fashion, and a large number of regulations yet extant enable us to trace details in various directions. Such a house usually contained a number of rooms that were used in common—such as the dormitories, dining-rooms, study halls, and lecture rooms, a *stuba facultatis*, in which the meetings of the masters were held—as well as private apartments, rooms for the masters and cells or chambers (which could not be heated) for the students. The arrangements were all based on the one hand upon the presumed celibacy of the masters, and, on the other, upon the youthful age of the students, which averaged between fifteen and twenty years. The entire mode of life, down to the minutest details, was regulated by rules established and superintended by the university. The times for rising and retiring, the hours for the two daily meals (the *prandium* at 10 A.M. and the *coena* at 5 P.M.), the kind of clothing to be worn (naturally, of a clerical cut), the instruction, the review hours (*resumptiones*), in short, everything was governed by precept. Nor were prohibitions lacking against noise, loafing, carrying weapons, the introduction of women, etc. It may safely be assumed, and, if needful, it can be proved by numerous documents, that then as now various ways were known by which both the prohibitions and the precepts could be circumvented.

The Teaching Staff. In the higher faculties the number of lecturing doctors was never large, usually from two to four theologians, three to six jurists, and one to three medical men. The theologians and jurists were generally holders of ecclesiastical benefices which had been incorporated with the university. The members of the medical faculty were also practising physicians and, so far as the university was concerned, played no great rôle. The teaching force of paid professors was sometimes supplemented by lecturing baccalaureates. In the faculty of arts the number of lecturers, as well as of students, was usually much larger. In the more important universities this faculty may have numbered as many as twenty or thirty members. The older lecturers had positions in a college and, perhaps, had a small fixed salary, or enjoyed a benefice. But the majority, being without salary, had to depend upon the tuition (*pastus* or *minerval*) and the examina-

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tion fees paid them by the scholars. Membership in this faculty, however, was not usually looked upon as a permanent vocation, but rather as a stepping-stone to something else. Often the lecturing masters in *artibus* were also students of some higher faculty as candidates for its degree. That goal attained, they either continued as holders of endowed lectureships or, preferably, secured ecclesiastical livings.

3. *The Course of Study.* When, at the age of fifteen or sixteen years, the *beanus* came up to the university from the local school where he had acquired the Latin, the literary language, his first care was to be matriculated by the Rector, a service requiring a fee, which was frequently, however, remitted *propter paupertatem* or, more rarely, *ob reverentiam* (in the case of well-known scholars or for the benefit of students recommended by them). He next betook himself to one of the lecturing masters in *artibus* and applied for admission into his classes. And when, finally, in the presence of the older students and the Master or Dean, he put off the *beanium* he was recognized as a student (*scholaris, studens*). (The frequently described *depositio sc. cornuum*, was the act of initiation. It consisted of all sorts of symbolic representations intended to impress the novice with the full import of his entrance into the world of academic culture.) After this he began to attend the prescribed lectures and exercises in the *facultas artium*, or, if he was too young, and not sufficiently prepared in Latin, he was assigned to a *paedagogium* or placed in the care of an instructor until he mastered the language.

The course in arts was about four years long and was divided into two parts, the division being marked by the first examination. After a year and a half or two years of study, devoted particularly to logic and physics, the student announced himself as ready for his first examination. If he could show that he had heard the prescribed lectures, taken part in the required number of disputations, and had acquired a sufficient sum of knowledge, he publicly received the first academic degree, the honor of the *baccalarius* (or, in its later form, *baccalaurus*). Examinations, the bestowal of degrees ("promotions"), occurred only at fixed periods, the "promotions" being by groups in which the individual student received a place (*locus*)

according to the success he achieved in the examinations. After several additional years spent in the study of the other philosophical branches, physics and mathematics with astronomy, metaphysics and psychology, ethics with politics and economics, the second examination took place, with its consequent "promotion" to the degree of *magister artium*. In the higher faculties the process was a similar one, only that greater attainments in knowledge were demanded for entrance, and a more advanced age was required before the degrees were conferred. It was the custom, for example, that a candidate should be thirty years old before he received the degree of doctor of theology.

It is worthy of remark just here that the new *magister artium* usually had to pledge himself to lecture for a couple of years (*biennium complere*) in the course in *artibus*. The purpose of this was two-fold: first, the preservation of the institution. Without such obligatory instruction there would often have been a dearth of teachers in this faculty, because no salaries were paid. In the second place, this practice was supposed to give the finishing touches to the student's own education.

The Middle Ages agreed with Aristotle, that ability to teach was the peculiar mark of a scholar. For this reason even the *baccalarius* was allowed to exercise his gifts not only in the disputation, but as a lecturer. As a matter of fact, the gradation into *scholaris*, *baccalarius*, and *magister* is apparently identical with that of apprentice, journeyman, and master, which we find among the medieval artisans. The apprentice learns; the journeyman learns, and produces and teaches as occasion offers; the master produces and teaches. The same divisions are found in the local schools: school-master (*ludi magister*), fellow (*socius*, often also called a *baccalarius*), and pupil.

It must not be supposed, however, that it was the rule during this period for students to complete the course in arts. Much less was this true of the courses offered by the higher faculties. Most of the students left the university without even obtaining the lowest degree of *baccalarius artium*. In modern times the contrary is the rule, for the reason that appointment to office

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is now conditioned upon the applicant's definite preparation for the discharge of his duties. But that was not the case during the Middle Ages. Not even a brief residence at a university seems to have been required for appointment to any office whatever. The only condition precedent to appointment to the ecclesiastical offices—the only kind really in question, for there was scarcely such a thing as a secular office—was ordination to the priesthood. Previous to such ordination, it is true, the candidate was expected to pass an examination before his bishop, but it was such that it could only remotely make any demands upon his scientific attainments, except, indeed, in that it required a passing knowledge of the Latin. Even as late as the close of the fifteenth century a very considerable number of the clergy had never attended a university at all. It may, however, be safely assumed that it had gradually become the proper thing for the higher clergy, at least, to have a university education; and in the chapters a certain number of places were often reserved for the graduates in theology. A knowledge of the law had also become more and more important for the higher clergy, while for the lower orders of ecclesiastics the degree of *baccalarius* or *magister artium* was always a weighty recommendation. Yes, even a mere matriculation card might cause its possessor to be preferred over his competitors. For this we have the testimony of the *rotuli* which the older universities sent to the Roman Curia from time to time. They contained lists of all the members of the university in the order of their academic standing, down to the simple *scholaris*. They are all applicants for benefices.

4. *The Matter and Method of Instruction.* For the medieval university teacher the subject matter of instruction was definitely fixed, and his task was simply to hand down (*tradere*) the fixed sum of knowledge to his successors. Theology obtained its facts, in the last analysis, through revelation; the Holy Scriptures (*sacra pagina*) were not only its original source of information, but its final authority as well. That authoritative source was to be understood, however, only as the Church explained it. And thus, through the elaboration and systematization of this given body of doctrine by the natural reason, the great theological systems of the Middle

Ages were built up and became at last the real content of theological instruction. In the faculty of law the great collections of Roman and ecclesiastical laws were the source and substance of instruction, supplemented by commentaries and glossaries. The faculty of medicine, also, depended upon a few works of canonical character, especially the writings of Hippocrates and Galen, with some later commentators, particularly Arabians, among whom Avicenna's name was the most distinguished. The faculty of arts, finally, gave instruction in the philosophical, that is to say, purely theoretical branches, so far as they can be derived from the natural reason. Here, also, the substance of instruction was drawn from the canonical text-books, above all, from the writings of Aristotle. In addition, Euclid was studied in mathematics and Ptolemy in astronomy, together with a limited number of newer texts, such as the *Summula Petri Hispani*, the *Sphaera* of *Joannes de Sacro Bosco*, and others.

In the higher faculties it was the rule for each teacher to lecture upon designated books. He was, as we would now put it, a paid specialist in theology, law, or medicine. In the faculty of arts, however, the principle of universalism was in vogue. Every master could lecture, at pleasure, upon any philosophical text. At the beginning of each term the books were, therefore, distributed among those masters who had announced themselves as lecturers for the year. The distribution was made sometimes by vote, *secundum senium*, sometimes by lot, and sometimes in rotation, in order that all might have the benefit of the more popular and remunerative lectureships. The presumption was that anyone who had completed the whole philosophical course, in which mathematics and the natural sciences were included, and had won the degree of *magister in artibus*, was in fact a master of his subjects and knew how to teach them. No one was expected to supplement the course with the achievements of his own wisdom. If, as sometimes happened, the lot resulted in an unwise distribution of the courses, it was most likely always possible to secure more suitable arrangements by exchange or resignation. The time-limit of a lecture, as well as the size of the fee for it, were prescribed by the statutes.

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The method of instruction everywhere consisted of two complementary parts, the lecture and the disputation.

The purpose of the lectures (*lectio, praelectio*) was the transmission of the sum of knowledge. Some canonical text-book, let us say one of Aristotle's writings, but of course in a Latin translation, was read and expounded. This does not mean that it was dictated to the students, for each hearer was supposed to have a copy of the text before him. Sometimes the teacher did read the text in the hearing of the class in order either to amend it or to correct its punctuation. Sometimes, for the purpose of more readily securing the needful number of copies, certain hours were set apart for mere dictation (*pronuntiare*). But the essential purpose of the lecture was to expound the meaning of the text. The *versus memoriales*, in which the method of expounding the judicial texts is schematically presented, will serve, with one or two adaptations, as an illustration for all:

*Praemitto, scindo, summo, casumque figuro,
Perlego, do causas, connoto, objicio.*

The purpose of the disputation was practice in the use of knowledge for the solution of controverted questions (*quaestiones*). This exercise does not appear to have been less important than the lecture. At the great weekly debates (*disputatio ordinaria*) the entire faculty assembled in a body in the Aula, or great hall, with the masters and students all in cap and gown. One of the masters, as presiding officer, then proposed theses, which the other masters were expected to attack in turn with syllogistically arranged arguments (*arguere*); while the bachelors assisted in defending the theses of their master by replying (*respondere*) to these arguments, a task in which they were guided by the *Praeses*, as occasion seemed to demand. Besides these disputations properly so called, at which the scholars were present merely as listeners, others were held under the guidance of masters or bachelors in which the students participated. In connection with the lectures there were exercises (*exercitia*) and repetitions (*resumptiones*) which closely approximated disputation.

The Middle Ages laid great stress on these disputations. The number which it was obligatory to attend was precisely fixed, and masters negligent in this respect were threatened with punishment. The idea seems to have been that the best of the course of instruction was to be gotten in these debates. And this was scarcely incorrect, for they must have been an excellent means for the attainment of knowledge, as well as for practice in applying the knowledge acquired. They certainly were well adapted to increase a student's alertness, his power of comprehending new ideas, and his ability quickly and surely to assimilate them to his own. It is a safe assumption that the students of this period attained a degree of perfection in these respects which it would be difficult to duplicate to-day. The modern scholar relies upon reference books for many things which his predecessor of the Middle Ages carried in his memory. The art of quickly and logically defining one's own thoughts as well as those of an opponent, while yet face to face with him, is likewise scarcely to be met with now, because it is no longer practised, except, perhaps, in the court-room. I do not doubt that such intellectual tournaments in which the students were taught to defend a thesis against attack, did more to enable them to grasp a subject than the mute and solitary reviewing and cramming of our modern examinations can possibly do. That method brought into play all the excitement of a contest, the triumph of success, and the disgrace of defeat, in order to emphasize the value of what had been learned, together with the importance of an alert wit and constant readiness to use it.

Of course, all this is not said here in order to recommend the resumption of such disputations in our day, but only to point out the reasonableness of the practice then. For us it has become impossible, partly for external reasons, for we no longer have the old scholastic communal life, partly because of the lack of uniformity in our culture, but more especially because knowledge is no longer debatable. Medieval knowledge had assumed the form of a system deduced from certain principles, the system, that is to say, of the Aristotelian philosophy. And this system was not only generally known, but universally recognized as the firm and authoritative basis of all science.

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Every dispute was decided by syllogistically proving that one of the asserted theses either agreed or disagreed with the principles of the "Master." We recognize no certain and universally acknowledged principles, at least no material ones, and without such principles debates could come to no conclusion. This was quite clearly recognized in the Middle Ages: *contra principia negantem non est disputandum*. Modern scientific efforts are directed toward the establishment of facts, and facts are matters of discovery, but not of debate. The passing of the disputations was directly due to this great change in the method of science which began in the sixteenth and became so decisive in the eighteenth century. By way of compensation we now have the various exercises in our *seminars* and the laboratories (*institutes*).

In conclusion, a word may be in place concerning the controversy whether the German universities of the Middle Ages—the German universities, let it be noted, for conditions were different in other countries—were or were not ecclesiastical institutions. Against the general tendency to answer the question in the affirmative, to which I also must plead guilty, G. Kaufmann constantly puts the emphasis upon their secular character. And it must be admitted that his position is formally and legally correct. The universities were not, legally considered, ecclesiastical institutions. They were founded, supported, and, in so far as they did not, by the autonomy granted them, control themselves, governed by the secular authorities. But there is good ground for asserting, on the other hand, that when judged by their general character the universities belonged more to the *status ecclesiasticus* than to what was afterward known as the "principality." The following points deserve consideration: 1. Knowledge and instruction were indisputably the business of the medieval Church. This accounts for the papal "bull" permitting the establishment of a school, as well as the statutory control of instruction by the Church. 2. The large majority of the members of a medieval university, not because of such membership or by provision of law, but as a matter of fact, were either actual or potential clerics; the *rotuli*, which were forwarded to Rome, describe them as applicants for ecclesiastical benefices. Indeed, aside

from ecclesiastical positions, only a few government positions or places in the medical profession were to be had. 3. The salaries of the paid university professors, especially in the higher faculties, consisted for the most part of ecclesiastical prebends, and therefore bound the beneficiary to attend to certain ecclesiastical duties as well. 4. The entire manner of life at the universities was cut after a clerical pattern; the cloister was evidently the model which controlled the government of the *collegia* and *bursae*. That some secular customs actually entered into this life, is doubtless true. But they also found their way into the monasteries and the episcopal residences, and invaded the Curia itself.

This difference of opinion, however, depends entirely upon the observer's standpoint. Looked at from the present, or for the purpose of explaining the medieval university to those who have a modern one in mind, the ecclesiastical characteristics will receive the emphasis. But when looked at from the standpoint of the older educational system, that of the cloister and cathedral schools, the universities, which checked and finally supplanted them, appear rather as one of the stages in the process that led at last to the complete secularization of instruction. This is particularly true of the old Italian universities, but also of the Cisalpine ones. The founding of the German universities by the principalities, as well as the contemporaneously established local schools of the municipalities, really formed the beginning of the secularization of instruction. But the process was not, at first, opposed by the Church, because she was still perfectly confident of her position; she regarded the new institutions as secular endowments for spiritual ends, similar to those in other fields, and rewarded the civil authorities by granting them the control of positions. But what might be called a subjective secularization of knowledge was also thereby introduced, for it was at the universities that literary work and scientific instruction first achieved a place as an independent calling beside the ecclesiastical employments and the cure of souls; and that speculation, now in constant touch with Greek philosophy and natural science, with Roman law and medical lore of Greek and Arabic origin, gradually struggled out of the narrow lim-

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itations of theological-ecclesiastical doctrines, and fell into the habit of seeking its criterion in itself. There can be no doubt that the medieval universities prepared the way for that great emancipation of subjective reason which occurred during the Renaissance and Reformation, even though their attitude was hostile in many respects to both these movements.

CHAPTER II

THE DEVELOPMENT OF THE GERMAN UNIVERSITIES IN MODERN TIMES

I. THE PERIOD OF THE RENAISSANCE AND REFORMATION.

The medieval era shades off into the modern in the great revolutionary interval of the Renaissance and Reformation. These mighty movements also had a transforming influence upon the universities.

1. *The Renaissance.* The conquest of the German universities by the new culture was accomplished during the first two decades of the sixteenth century, after the presence of a few storm-petrels, even since the middle of the fifteenth century, had presaged the coming tidal-wave. During this entire time there was a bitter struggle between the old and the new. The entire traditional university instruction, especially as it prevailed in the faculties of arts and philosophy, and theology, was attacked with extreme violence by the representatives of the new poetic and literary culture, who styled themselves orators and poets, in contrast to the philosophers. Both the form and content of the prevailing instruction were denounced with the utmost contempt as stupid barbarism. In the *Epistolae obscurorum virorum*, which originated about 1516 in the circle of young poets gathered about Mutian in Erfurt, the hatred and contempt of the younger generation for the old, of the new culture for the old university idea, have found an enduring expression.

Foremost among the men who represent the vitality of humanism are Erasmus and Reuchlin. The latter blazed the way for the study of Hebrew in Germany, and gave a fruitful impetus to the study of Greek. Erasmus, a man of great power and activity of mind, taught the Germans a simple, natural,

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and elegant Latin, awakened everywhere a taste for finer culture, paved the way for historical-philological investigations, and, finally, through his New Testament studies, brought humanism and theology into closer relations. His peculiar task, however, was to divert attention from the scholastic systems of theology to the study of the original sources and the literature of the ancient church. It is worthy of note that Erasmus always refused to accept a chair in a university, though repeatedly and urgently pressed to do so, doubtless because he did not regard such a position as commensurate with his importance; the task which he set himself was to represent and diffuse the new and independent culture in the society of the great ones of the earth.

The new culture triumphed all along the line. By 1520 it had taken root in all the larger universities. New curricula everywhere admitted the new branches, at first by the side of the old, into the course as well as into the examinations. Three things especially strike our attention: 1. Classical Latin superseded the old scholastic Latin of ecclesiastical usage. The Latin translations of Aristotle were replaced by newer humanistic ones. 2. Greek found a place in the universities. Lectureships in the Greek language and literature were established everywhere. 3. Ancient Roman and Greek authors, particularly the poets and orators, were included in the courses, essentially with a view to tempting the student to literary imitation. Prominent among the earliest Greek scholars of the German universities were Reuchlin, who taught a short time at Tübingen and Ingolstadt, P. Mosellanus, of Leipzig, and, above all, Philip Melancthon, of Wittenberg. Among the Latin scholars we may mention Conrad Celtis at Vienna, Eobanus Hessus at Erfurt, and H. Bebel at Tübingen.

The sudden overthrow of scholasticism, that is to say, of the entire old system of instruction, which had held sway at the universities for three centuries, was an astonishing event indeed. It has been for a long time customary to view it only through the spectacles of the humanistic poets and orators and consequently to regard it as something quite natural and self-evident: darkness and barbarism had simply been dissipated by the rising sun of humanism. That the case was not quite so

simple appears from the fact that the scholastic philosophy revived; indeed it experienced a kind of restoration as early as the sixteenth and seventeenth centuries, and an actual restoration, in the Catholic schools, in the nineteenth century. This philosophy must, therefore, satisfy an actual want; in the last analysis, it is simply the expression of the desire for a world-view on an ecclesiastical basis that can be verified in thought or, at least, justified by reason. It was the aim of the scholastic philosophy to exhibit the faith of the Church as rational and as agreeing with scientific knowledge, an aim which is still intelligible to us. It is no less intelligible, however, that the problem was not completely solved. For, to be sure, this philosophy was cumbered with a fundamental weakness: it was not allowed to investigate points which had been authoritatively decided, not even when the points involved historical or natural facts; it was, under all circumstances, in duty bound to show that what was believed was actual and that the actual was reasonable. In this way it became customary not to attribute much importance to the problem of the actual. Instead of an investigation into the reality of asserted facts the demonstration of their possibility and reasonableness was admitted as sufficient, and faith accepted their reality. Pneumatology, the doctrine of spirits good and evil, was especially developed along this line. That such ceaseless and aimless debates without investigation should at length have produced a feeling of weariness and disgust, like that felt by Faust, and led to the desire for something tangible and real, both in nature and history, which we see coming to the surface in the Renaissance, becomes self-evident to us when we note a similar example in the modern reaction against the exaggerated rationalism of Hegelianism.

Still another reactionary phenomenon, it seems to me, came into play. A kind of undulatory movement is perceptible in the history of intellectual life. Periods of logical-philosophical ascendancy alternate with periods of poetical-literary interest. Such a change took place at the end of the fifteenth and beginning of the sixteenth centuries. After the long, it might almost be said absolute dominance of the logical-rational systems in the intellectual life of Europe, which began with the thirteenth century, the poetical-literary impulse made itself felt with

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tremendous force. But this change was also the assertion of the personal and individual against the rational and universal. A similar change occurred at the close of the eighteenth century. After the long sway of the logical impulse, whose last representative was the Wolffian system, the poetic tempest of Goethe's time came on with storm and stress. In this as in the earlier instance the conflict between the two tendencies was also a conflict of the young against the old, of the young who desire and seek the new against the old men who defend what they already possess.

2. *The Reformation.* Just as the new poetical-literary culture seemed to have won the victory over the old scholastic system, it was itself in turn overtaken by a movement of an entirely different kind and origin: the Reformation. Issuing from the depths of man's religious nature, and strongly appealing to the emotions of the masses, the ecclesiastical revolution almost extinguished, for the time being, the æsthetical-literary movement of the Renaissance which, after all, had only affected the leaders of society and its culture. At first, indeed, the Reformation seemed to be the ally of the humanistic movement. Luther and Hutten were alike hostile to the scholastic philosophy and theology, as well as in rebellion against the usurpations and inordinate greed of Rome, while as champions of German freedom they stood side by side in 1520. Essentially, however, they were men of very different natures, and very different, also, was the freedom which they proposed to win for the German people. Luther was a man of deep, personal, anti-rationalistic religious feeling, to whom the prevalent ecclesiastical piety seemed all too worldly and sordid, while Hutten represented a rationalistic and libertinistic individualism which could compromise either with the secular or ecclesiastical forces as occasion seemed to demand. Hutten did not live to see the great antagonism which came to light. Beginning with 1522-23 the eyes of the humanists were opened to the situation, and they turned their backs upon a reformation which, even more than the old church, opposed culture and research. And for the moment it really seemed as if the effects of the Reformation would be essentially hostile to culture, for, the Muses having been frightened away by the noise of the theological conflict, the

universities and other schools came almost to a stand-still during the storms of the second decade of this century, so that Erasmus could declare that knowledge perished wherever Lutheranism became dominant.

But the final result was different. In a certain sense the alliance between the Reformation and Humanism was restored, even with Lyther's assistance. But it was most thoroughly represented in Melanchthon. With persistent but quiet efficiency this labor-loving man planted and fostered the humanistic studies at the German universities, and that in spite of the fact that the time was very unpropitious. Combining in his person almost a complete philosophical faculty, he lectured for forty-two years (1518-1560) upon well-nigh all the philosophical and philological-historical subjects as they were then understood. With the fourth decade of the century Wittenberg became the most popular of the German universities. Young men flocked to it from all the countries of Germany, yes, of Europe. And when Melanchthon died there was probably not a city in Protestant Germany in which some grateful student did not mourn the loss of the *Præceptor Germaniæ*. And long after his death he controlled, through his method and text-books, the instruction in the Protestant schools and universities. It was primarily due to him that the Protestant half of Germany won the ascendancy over Catholicism in the realm of education and culture. There can be no doubt whatever about the final outcome: German philosophy and science, German literature and culture grew up in the soil of Protestantism, and they may be described as the result, although perhaps remote, of that spirit of freedom and independence of thought which the Reformation called into being.

The subsequent development of the German universities, up to the present time, may be divided into three periods:

1. *The Period of the Territorial-Confessional Universities.* It dates from the middle of the sixteenth to almost the end of the seventeenth century, and is characterized by a preponderance of theological-confessional interest. The theological faculty was the most important, and instruction remained in its medieval trammels.

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2. *The Period of the Origin of the Modern Universities.* It is comprised by the eighteenth century, and is defined by the adoption of modern philosophy and science and the prevalence of the new principle of academic freedom. The philosophical faculty achieves the leadership, while the legal faculty becomes the most distinguished.

3. *The Period of the Dominance of Scientific Investigation.* It is comprised by the nineteenth century, and is characterized by the growing importance of the spirit of scientific research, as distinguished from the mere attempt to supply general or professional culture. The philosophical faculty retains its leading position, and the medical faculty comes to the front.

II. THE SIXTEENTH AND SEVENTEENTH CENTURIES. THE TERRITORIAL-CONFESSIONAL UNIVERSITIES.

1. *New Foundations.* The first stage of the great religious conflict came to an end with the close of the Peasants' War. The second stage followed with the organization of established churches upon a Protestant basis, and for two hundred years the universities stood in closest relations with these establishments. The old universities were restored, first by Protestants, and then by Catholics, in harmony with these new ecclesiastical situations, and a large number of additional ones were founded.

The first new Protestant foundation was the Hessian university of Marburg (1527). It was followed (1544) by Königsberg, for the secular duchy formed out of the territory of the Teutonic order, and by Jena (1556), for that portion of the old electorate of Saxony which remained in the possession of the Ernestinian line after the Albertians had obtained Wittenberg with the electoral dignity. And notwithstanding the smallness of the territory in which it is situated and the scarcity of means this seat of the Muses on the Saale has to this day maintained a very honorable place among the German universities. In 1576 a university with considerable equipment was established at Helmstädt for the duchy of Brunswick. It was one of the most important of the German Protestant institutions of the seventeenth century. The theologian Calixtus and the polyhistor H. Conring, the founder of the history of German law, were especially prominent in its faculty. The two foundations of the

free-cities of Altdorf and Strassburg must also be numbered among the more important universities of the seventeenth century. The former grew out of the gymnasium of Nürnberg, which was removed to Altdorf in 1573 and raised to the dignity of a university in 1622. The latter grew out of the gymnasium of Strassburg (1621), which had previous to this time been equipped with academic lectureships. Of minor importance was Giessen, detached in 1607 from Marburg (which had gone over to Calvinism), as a Lutheran institution for Hesse-Darmstadt. Rinteln, in Schaumburg (1621), and the Reformed university of Duisburg (1655) belong to the same class. More important was the university founded in 1665 in Kiel for the duchies of Schleswig-Holstein. Contemporaneously with the universities there came into existence, also, a large number of so-called academic gymnasia, institutions which offered, in addition to the ordinary school-curriculum, a limited number of philosophical and theological lecture courses. Some of these, the one at Hamburg, for instance, continued down to the present century. Of more consequence during the seventeenth century was the Reformed school at Herborn.

The Catholic countries also show a large number of new foundations. The first one was Dillingen, established by the Bishop of Augsburg (1549). It was for quite a while the focus of scientific study for Catholic Germany. Würzburg, established with considerable equipment by the Prince-Bishop Julius, came next. Then, in order, Paderborn (1615), Salzburg (1623), Osnabrück (1630), Bamberg (1648), all episcopal foundations; and in the Hapsburg domains: Olmütz (1581), Graz (1586), Linz (1636), Innsbruck (1672), and Breslau (1702). Some of these were never full-fledged universities. They were merely privileged philosophical and theological institutions, usually in the control of the Jesuits. Some also had a law faculty.

The foundations of this period showed, on the whole, less vitality than the universities which dated back to the Middle Ages. Of the ten Protestant foundations enumerated above five are still in existence: Marburg, Jena, Königsberg, Giessen, and Kiel, to which must be added the revived university of Strassburg. Helmstädt, Rinteln, Duisburg, and Altdorf were

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discontinued during the great reconstruction of the German states at the beginning of the nineteenth century. The episcopal foundations also went under with the ecclesiastical states which controlled them. The Bavarian institution at Würzburg is the only one of these that remains to-day. Remnants of some of the others continue to exist as theological seminaries. The Austrian universities of Graz, Innsbruck, and Breslau also continue in existence.

The chief impetus leading to these numerous foundations was the accentuation of the principle of territorial sovereignty from the ecclesiastical as well as the political point of view. The consequence was that the universities began to be *instrumenta dominationis* of the government as professional schools for its ecclesiastical and secular officials. Each individual government endeavored to secure its own university in order, in the first place to make sure of wholesome instruction, which meant, of course, instruction in harmony with the confessional standards of its established church; in the second place, to retain the training of its secular officials in its own hands; and, finally, render attendance at the foreign universities unnecessary on the part of its subjects, and to keep the money in the country.

With adequate financial resources the thing was easy. Large amounts were not needed, a few thousand guilders or thalers sufficed for the salaries of ten or fifteen professors, a couple of preachers and physicians would undertake the theological and medical lectures, and some old monastery would supply the needed buildings. Expensive laboratories did not as yet exist. And if the means at command were not sufficient for even this much, then the already existing territorial school would be transformed into a *gymnasium academicum* or *illustre* by the addition of a few lectureships to its course of study, and by and by, as opportunity offered, the university privileges, now quite easily secured from the Emperor, would be applied for.

• All this implies, of course, that the universities of this period lacked the universality so noticeable in those of the Middle Ages. The inter-territorial, not to say international freedom of transfer from one institution to another, so characteristic of the old *studium generale*, was gone. Territorial boundaries, or at least the boundaries of creed, also marked the limits of a

university's field. Positive prohibitions, special and general, based upon credal or financial reasons, against attendance upon foreign universities, were not infrequent. Thus, for example, during the seventeenth and eighteenth centuries, the people of Brandenburg were repeatedly forbidden to patronize the Saxon university of Wittenberg, the home of the old Lutheran orthodoxy, because the Saxon dynasty had gone over to the Reformed faith. But even at this time the young German scholar's love of travel could not actually be repressed. The Dutch universities continued to be especially well patronized. During this period, also, a more determined effort was made to control instruction than at any period before or since. The fear of heresy, the extreme anxiety to keep instruction well within orthodox lines, was not less intense at the Lutheran than at the Catholic institutions, perhaps it was even more so, because here doctrine was not so well established, apostasy was possible in either of two directions, into Catholicism or Calvinism. Even the philosophical faculty felt the pressure of this demand for correctness of doctrine. Thus came about those restrictions within the petty states and their narrow-minded established churches which well-nigh stifled the intellectual life of the German people. We are less in touch with the period between the middle of the sixteenth and beginning of the seventeenth centuries than with any other in the entire history of our nation.

2. *Organization and Instruction.* In general the old forms maintained themselves through all the changes of the sixteenth century. The general scheme of organization remained intact, and with it its independence and legal autonomy. The university, with all of its members, and even their relatives and servants, continued to enjoy exemption from local jurisdiction; it had independent jurisdiction both in civil and criminal cases, but was liable to review by the territorial supreme court. The four faculties, and the fundamental regulations for instruction and examinations, remained essentially unchanged with the exception that the first of the two degrees, the baccalaureate, practically disappeared as early as the sixteenth century. It is noteworthy, however, that with the beginning of the sixteenth century the system of permanent lectureships endowed by the government became fixed in all the faculties, even in the philo-

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sophical, marking the origin of the modern professorships. The incumbent of such an endowed lectureship was obliged to lecture *public* on the subjects of his department at least four times each week. These public lectures, delivered in the auditorium of the faculty and arranged according to a "schedule of studies," embraced the entire course required for admission to the examination. There was, in addition, private tutoring of all kinds, from the elementary courses in the languages to the final preparation for the academic examinations and the disputations.

At the head of the several faculties stood the theological, for, since theological interests still controlled the entire trend of knowledge it also controlled instruction in the universities. And, as a rule, this faculty was also the largest, because, since the second half of the century, under the Reformation influence, the demand for theological education for all the clergy had gradually won the day. This was the result of the Protestant principle, which accentuated the idea of doctrine and its purity, and placed the emphasis upon preaching instead of liturgy in worship. Even the Catholic church was thereby influenced to a stronger accentuation of doctrine and preaching, and, consequently, also of scientific study. Her theological seminaries date from the time of the counter-reformation. But if Protestantism influenced Catholicism in this direction it, in turn, suffered a reflex effect in that it relapsed from its original devotion to a biblical theology into scholastic dogmatics. The Bible, it would seem, did not supply the system of ideas and those doctrinal formulæ which were necessary for the control of the human mind and the subjection of opponents.

The faculty of law grew in extent and importance in proportion to the development of the modern state. The recognition of the Pandects as the authoritative system of law made a scientific course of preparation indispensable for both judge and lawyer, and the old-fashioned illiterate village "justice" retired before the learned "judge." This was true, of course, at first only of the higher courts. About the same time the faculties of law themselves began to assume the functions of courts of arbitration. For the gradually developing class of civil officials, also, a knowledge of the new legal lore became desirable, and,

after a while, essential. Thus our modern bureaucracy, based upon the absolute power of the state and an alien law, divorced itself from society and constituted itself an independent entity, like the Church. Law, like theology, became an esoteric science, and the judges dealt out decisions to the laity as the priests dispensed doctrines and the sacraments. The form of instruction in the faculty of law underwent a gradual change, and instead of the mere interpretation of texts it became the practice to expound particular codes of law—the *mos Gallicus* supplanted the *mos Italicus*.

As in the Middle Ages, the medical faculty remained by far the weakest; numerically it scarcely deserved consideration until the beginning of the nineteenth century. As late as 1805 the whole number of medical students in the Prussian universities was only 144, compared with 1036 law students and 555 theologians. Important changes began, indeed, to be foreshadowed in the methods of investigation and instruction. Anatomy and physiology began to develop independently. By basing the science of the human body upon observation and experiment medicine was gradually emancipated from the traditional textbooks, and in the class-room observation and experiment asserted their rights by the side of such texts. But for a long time the German universities, it is true, lagged behind the foreign institutions. Progress was made in the sixteenth century mainly by the Italian universities, and in the seventeenth and eighteenth centuries by those of the Netherlands. The prevailing aversion to dissection as a desecration of the human body could only be overcome gradually. This seems all the more strange to us to-day because the same people certainly had no aversion whatever to the practice of torturing, mutilating, and dishonoring the living body in every possible way by due process of law.

The faculty of philosophy, as the old *facultas artium* had come to be called since the universal renaming of things by the humanistic movement, retained its general position as the intermediate link between the Latin school, in which the learned tongues especially were taught, and the higher faculties, in which scientific professional training was acquired. Its peculiar task was to supplement the instruction of the Latin

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school by a general scientific and philosophical education. To be sure, it was gradually somewhat sharply differentiated from the Latin school because the development of the higher schools of learning, first in Protestant, and then also in Catholic countries, where the Jesuit colleges corresponded to the territorial and cloister schools of the former, gradually relieved the universities of the task of elementary instruction. There was likewise a gradual increase in the average age of the student body. As before, the Aristotelian texts continued to be the essential basis of instruction, and because there was at this time a very general, though seldom achieved, purpose to put Aristotle in the original in the hands of the students, the lectures were either based upon the Greek texts, or upon books which contained those texts in a revised form, a practice for which Melanchthon had supplied the model in his compendiums.

In addition to the course in philosophy there was one in the humanities, with interpretative lectures on the Greek and Latin classics, accompanied by exercises in poetical and oratorical imitation. These exercises were scholastic in character. The professor of eloquence and poetry taught the art of constructing, in Latin, of course, all kinds of declamations and poems, and practised, as an expert, the art which he taught by celebrating all the public functions of the university with orations and poems. The instruction of the ancient rhetorical schools was to some extent revived by these epideictic speeches, for which, again, Melanchthon's *declamationes* furnished the type. As the Renaissance faded into the distance this humanistic instruction lost its importance in comparison with the philosophical-scientific. Since the middle of the seventeenth century Latin speeches and poems ceased to be in vogue in the learned world. The French language and literature began to assert themselves, first of all prevailing in court circles and the world of fashion, where they had an almost unlimited dominion for more than a hundred years before they triumphed in the universities. The old classical culture now suffered the same fate at the hands of the new culture *à la mode*, which it had dealt out to the scholastic culture of the Middle Ages. Latin poetry and eloquence were now as much despised as outworn scholastic plunder by the new "moderns," with Thomasius at their head,

as the philosophy and theology of the pseudo-philosophers and theologians had been two centuries before. The professors of eloquence and poetry exhausted themselves in vain complaints against the contempt for the fine arts and the returning "barbarism of the Middle Ages."

With respect to the outward regulations of life, the abolition of the entire old ecclesiastical order in the Protestant countries carried with it the habits and customs based upon it. The communal life of students and teachers in the colleges and "burses" ceased with the cloister life and the celibacy of the teachers. In addition, the age of the students increased, the gradual development of the old Latin schools into gymnasias (*Gelehrtenschulen*) delayed the student's entrance to the university, as a rule, until he was seventeen or eighteen years old, though a considerably younger as well as older age was not infrequent. Another influence to this end was the fact that the higher faculties, the theological and juridical, whose students because of their mature age had probably not been compelled to live in the colleges and "burses," even in the Middle Ages, now became numerically the most important. And those of the secular nobility who did not enter the army for a career now also began to seek their intellectual training in the juridical faculty.

Thus, during the sixteenth and seventeenth centuries, the modern student developed out of the *scholar* of the Middle Ages. The change became apparent even in the outward appearance: the *scholar* had been compelled by university rules to adopt a clerical costume and behavior, but since the middle of the seventeenth century the student has taken the cavalier for his pattern both in dress and demeanor. And with the rapier as an indispensable part of a cavalier's equipment the duel also made its entry into the university world.

A remnant of the old customs continued in the territorial *convicta* which had been built at most of the universities and in which poor students could obtain free lodging and board, or only the latter. These *convicta*, like the ducal or territorial schools, owed their establishment to the great dearth of candidates for the learned professions directly brought about by the break-down of the old ecclesiastical order in the sixteenth

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century. The means for these institutions, as in the case of the ducal schools, were obtained, as a rule, from the confiscated lands of the church. The enjoyment of their privileges carried with it the obligation to serve the country in a secular or clerical capacity. The custom also arose for professors to receive students into their homes as lodgers and boarders, a practice which obtained largely as late as the eighteenth century.

3. *Value and Significance.* At the end of the seventeenth century the German universities had sunk to the lowest level which they ever reached in the public esteem and in their influence upon the intellectual life of the German people. The world of fashion, which centered at the princely courts, looked down upon them from the heights of its modern culture as the seats of an obsolete and pedantic scholasticism. A man like Leibniz, who had secured his scientific education at Paris and London, disdained a position at a university, although, as the most distinguished scholar and philosopher of Germany, such a place was naturally open to him anywhere. He preferred the courts, where he could hope to find readier appreciation and assistance for his intellectual strivings, his comprehensive plans for the improvement of the entire culture of the German people. The organization of scientific societies or academies, which he carried on with restless energy (the Berlin Academy, it is well known, established in 1700, was due to him), is also an evidence of the hopelessness with which he regarded the old universities: he wished to establish scientific research, for which he did not hope for anything from the universities, at the new institutions and to leave only the ordinary school-instruction in the hands of the former.

In fact, university life at this time presents a lamentable aspect. Academic science was no longer in touch with reality and its controlling ideas; it was held fast in an obsolete system of instruction by organization and statutes, and toilsome compilation was the sole result of its activity. Added to this was the prevailing coarseness of the entire life. The students had sunk to the deepest depths, and carousals and brawls, carried to the limits of brutality and bestiality, largely filled their days. Even the professors, by reason of their dependency and poverty, seem frequently to have been pulled down into the mire.

The disrepute into which German scholarship and the German name in general had fallen among the other nations at this time may be gathered from an utterance of Queen Christine, a daughter of Gustavus Adolphus, who had gone over to Catholicism.

From Hamburg she wrote to her admirer, Cardinal Azzolino, in Rome: "It is better to be a heretic than a German, for a heretic can become a Catholic, but a brute can never become reasonable. May the country and the stupid brutes which it produces be damned . . . I assure you that among all the animals in the world none are more unlike human beings than the Germans. So far as the doctors are concerned I would as readily consult my carriage-horses as listen to them; they are all brutes and ignoramuses who kill people with their phlegm and clumsiness, things that are genuinely German but more horrible than death itself. . . . A very amusing thing happened to me in connection with one of the sybils of this country, who met me, to my misfortune, with a French book in my hand. That gave her the opportunity to begin a conversation about books and to say that she had read a great deal in her life, and had thereby ruined her eyes, and therefore did not read any more, except, indeed, one book in which she read every day—the 'Compendium of the Aristotelian philosophy.' I never felt such a desire to explode with laughter."¹

The remarks of this lady are doubtless extravagant and malicious. But her judgment was evidently only an echo of a thousand other judgments which she had heard in the company of scholars and wits of many lands of which, in her own country, she had been the honored center. The judgment which P. Bonhours, a French Jesuit, passed upon P. Gretser, a German confrater, dates from the same period: *il a bien de l'esprit—pour un Allemand*.

The entire new-German literature of the eighteenth century, beginning with Klopstock and Lessing, re-echoes these feelings and opinions in expressions of contempt for the name of the scholar. An abundance of testimony to this effect is brought together in Hildebrand's article *Gelehrt und Gelehrsamkeit*

¹ E. Daniels, *Christine von Schweden, Preuss. Jahrbücher*, vol. xcvi., p. 81.

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(in Grimm's *Wörterbuch*). Even the ingenious storm and stress period, with its passionate striving after nature and originality, and contempt for scholasticism and book-learning, as it still speaks to us in Faust, is a reflection of these feelings and opinions.

• III. THE EIGHTEENTH CENTURY. • THE ORIGIN OF THE MODERN UNIVERSITY.

1. *The New Foundations.* Two important new foundations introduced the new period: Halle (1694) and Göttingen (1737), to which Erlangen (1743), the university of the Franconian principalities, must be added, which became an important link between North and South Germany. All three of these institutions are still flourishing. The first two opened the doors of the German university to modern philosophy and science, as well as to modern enlightenment and culture, and made these things a part of the life of the German people.

Halle, the university of the rising Brandenburg-Prussian state, received an impress especially from three men: the jurist Christian Thomasius,—who introduced the study of jurisprudence,—the theologian A. H. Francke, and the philosopher Christian Wolff. Thomasius, a pupil of Samuel Pufendorf, the first teacher of the theory of natural rights at a German university (the first chair for the new treatment of law was established at Heidelberg in 1662), was a man of the new culture represented at the French court. He was the editor of the first monthly magazine in the German language (1688), as well as the first to use that language in the lecture room. A despiser of the scholastic philosophy and humanistic eloquence, theological orthodoxy and the old pedantic jurisprudence, he came into violent conflict with his own university of Leipzig, in which he taught as a *private docent*. He was compelled to yield and went to Halle, where he was favorably received. The circle of students which he gathered about him became the nucleus of the university founded there in 1694. The theological faculty received its impress from Francke, the chief representative of pietism, who was also excluded from orthodox Leipzig; his efforts were directed towards the devout study of the Bible and practical Christianity. The orphan asylum which he founded in Halle

became a training-school in practical Christianity and elementary instruction for his students. During the second half of the century Joh. Sal. Semler taught in the theological faculty. He was the founder of the critical-historical treatment of the sacred Scriptures.

Of greatest significance, finally, was the philosopher Christian Wolff, who taught in the philosophical faculty at Halle from 1707-1723 and again from 1740-1754, and in the interim at Marburg. His banishment by Frederick William I. and his triumphant restoration by Frederick the Great mark the turn of the times. Wolff's success really indicates the end of the scholastic philosophy; its place was taken by modern philosophy, which, in the form of the Wolffian system, assumed the control of the German universities. The aim of philosophical instruction up to this time had been to inculcate the scholastic Aristotelianism, primarily as a preparation for the study of theology. The new philosophy now defiantly appealed to its own reason. Wolff's *Vernünfftige Gedanken*, the general title of his German works, positively denies the dependence of philosophy upon theology. Basing himself upon the modern sciences of mathematics and physics, he declares that philosophy should seek the truth free from all assumptions, regardless of what may happen to the theologians. Similarly as in the case of theoretical philosophy, the theological basis of practical philosophy was also positively repudiated: law and morals, he declared, must be based upon a rational knowledge of human life and society.

During the eighteenth century the Wolffian philosophy prevailed at all the Protestant universities. Even the higher faculties felt its influence; jurisprudence and theology accepted its "rational notions." At no time was reliance upon reason as the appointed guide in all questions of thought and practice so great as during the second half of the eighteenth century. In developing a new theory of the universe, based on mathematics, in destroying the belief in witch-craft and demoniacal possession by the triumphant conception of nature as controlled by law and reason, in laying the foundation for the mechanical control of the forces of nature, reason seemed to have irrefutably demonstrated its ability to set as the guide of thought and life.

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It was with this faith that the new philosophy was welcomed and became dominant.

The reception of the new philosophy and science marks a turning point for the German universities. Through it they were enabled to struggle out of the bog in which they had lain at the close of the seventeenth century, and under the leadership of the Wolfian system they won the ascendancy in the intellectual life of the German people. The reason why the universities of the great neighboring countries west of Germany are of so much less significance in the life of those nations to this day is found in the fact that they did not accept the new philosophy, that they continued to be schools which could not tolerate freedom of thought. In France and England the leaders of thought remained outside of the universities—think of the Encyclopedists—while in Germany, since the day of Wolff and Kant, they have been a part of them. It was not at the Berlin Academy that these two leading spirits exercised their influence, but at two provincial universities. It is an evidence of the change which had taken place since the days of Leibniz, that Wolff, in 1740, refused to go to the Berlin Academy and the court, but preferred the university.

Halle has the honor of being the first modern university: it was the first one founded on the principle of *libertas philosophandi*, of free research and instruction. There was a distinct consciousness of this at Halle. When, in 1711, the university celebrated the birth-day of its founder, Professor Gundling delivered an address: *De libertate Fridericianae*, in which he eulogized the youngest university as the citadel of free thought. Its conclusion was in these words: *Veritas adhuc in medio posita est: qui potest, adscendat, qui audet, rapiat: et applaudemus*. It was a bold declaration, but one which exactly described the great change which had taken place. The older university instruction was everywhere based upon the assumption that the truth had already been given, that instruction had to do with its transmission only, and that it was the duty of the controlling authorities to see to it that no false doctrines were taught. The new university instruction began with the assumption that the truth must be discovered, and that it was the duty of instruction to qualify and guide the student in this task.

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By assuming this attitude the university was the first to accept the consequences of the conditions which the Reformation had created.

During the second half of the eighteenth century the university of Halle was confronted by a rival in Göttingen that ultimately surpassed it. • At the close of the century Göttingen was looked upon as the fashionable university; here the German counts and barons of the Holy Roman Empire studied politics and law under Schlözer and Pütter. Here Mosheim taught church history and the elegancies of pulpit diction, and J. D. Michaelis oriental languages. Here labored Albrecht von Haller and his successor Blumenbach, in their day the chief representatives of the science of man, or physical anthropology; as well as the celebrated astronomer Tobias Mayer, the brilliant physicist Lichtenberg, and the able mathematician Kästner. Finally, the newly awakened study of antiquity found its first nursery at this university; the philologists, J. M. Gesner and J. G. Heyne, to whom is due the reintroduction of Greek into the university, found a new point of view for the treatment of the classical authors: the study of the classics was no longer to be a useless erudition, nor yet an imitation of Greek and Latin models, but a living, cultural intercourse with the classical authors as the highest patterns of art and taste. This was the viewpoint of the new humanism through which the study of antiquity once more acquired a reasonable and human purpose: the cultivation of a sense and taste for the beautiful and sublime in literature. The new humanism did not stand in opposition to, but came into living reciprocal relation with contemporaneous German poetry, which was also centered at Göttingen. It is enough to mention Haller's poems, Gesner's German Society, and the *Hainbund*.•

Halle and Göttingen were the recognized leading universities in the eighteenth century, Halle with its 1000-1500 students having (besides Jena and Leipzig) the largest attendance, while the more exclusive Göttingen did not go beyond the first thousand. Under their leadership a complete reformation of the entire German university system was brought about, at first only in the Protestant north, then also in the Catholic south. Austria and Bavaria as well as the Franconian and Rhenish

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bishoprics, unable to withstand the pressure of the triumphant enlightenment, and under the influence of both the political and military superiority of the "philosophical" King, determined to follow suit; and by the middle of the century a thoroughgoing reform of the entire university and school systems in all these countries had taken place. At the close of the eighteenth century the German people regarded its universities as institutions from which, particularly, it expected to receive its impulses toward progress in all the departments of life, the same institutions which only a century before had called forth the derisive laughter of polite society.

I call attention to still another fact. The rise of the German universities in the eighteenth century was primarily due to the rise of the philosophical faculty from servitude to leadership. If before this time it had, to adopt an expression of Kant, as *ancilla theologiae* borne the train of the mistress, it now carried the torch before her, as well as before the faculties of law and medicine. It is, however, worthy of remark, that its preservation was due to its former relation to theology. If the theological faculties had not maintained themselves as living parts of the universities in the Protestant territories, it is to be presumed that philosophy and the philosophical faculties could not have done so either. The case becomes clear when we contrast the development in Germany with that of France. In France, after the Council of Trent and the establishment of the episcopal seminaries for the education of the clergy, the theological faculties lost their students, and practically ceased to exist as educational establishments, and only the ghostly shadow of a degree, or rather title-conferring institution remained. At the same time the old faculties of arts, although they continued as corporate parts of the universities, became transformed into independent lower schools (*collèges*) which had no essential connection with the higher faculties, and no vital relation to the literature and culture, philosophy and science of the day. The result was that the juridical and medical faculties alone were retained, as independent professional schools, however; and as such they were finally legally organized during the Empire. In Germany, on the other hand, the education of the clergy continued to be a function of the universities, more especially in

the Protestant, but to a considerable extent also in the Catholic countries. And on that account the theological faculty, during all of the sixteenth and seventeenth centuries the most important and best attended, kept the philosophical faculty alive as its preparatory school, for without philosophical and philological studies there could be no scientific theological education. Thus, in this respect also the German university is most closely connected with the Reformation.

2. *Changes in University Instruction.* They can be summed up as follows:

(1) Modern philosophy with its principle of the independence of human reason and based upon the modern sciences, especially mathematics and physics, superseded the Aristotelian-scholastic philosophy.

(2) The principle of freedom in research and instruction took the place of a hard and fast form of instruction.

(3) A corresponding change occurred in the method of instruction: the systematic lecture superseded the old form of exposition of canonical texts. In connection with this came the division into semesters, which made transfers from one university to another easy. Halle and Göttingen were foremost after Witteuberg in having a rapidly changing student body drawn from all parts of Germany.

(4) The disputations began to decline with the scholastic philosophy; in their stead the university seminars came into favor, among which the philological seminars of Gesner and Heyne at Göttingen, and F. A. Wolf at Halle, were the leading ones.

(5) The dead old-humanistic imitation of the ancient languages was superseded by the living new-humanistic study of the ancients, especially the Greeks. In this the university came into the closest relationship with youthful German literature and the entire new culture influenced by it.

(6) The German language became the vehicle of instruction instead of Latin. This was an important event; for the first time a living and quickening language obtained an entrance into the universities, which could never have made a deep and broad impression on the general culture with the stiff and lifeless scholastic Latin. To anyone, however, still regretting the

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passing of Latin as the "language of science," or even dreaming of its possible restoration, I should like to commend the following from Döllinger, a Catholic theologian who knew and used the Latin in his lectures: "Nothing could be more desirable and convenient for the mediocre and weak teacher, who has only the traditional to impart, than the use of the Latin language. His own lack of clearness of thought and meagreness of ideas can be admirably disguised in the well-worn ruts and impoverished idioms of this language in its modern form. Commonplaces which would be unbearable when clothed in German always sound somewhat more respectable in a Latin disguise." (*Die Universität sonst und jetzt*, page 16)

IV. THE NINETEENTH CENTURY. THE DOMINANCE OF SCIENTIFIC RESEARCH.

1. *New Foundations.* At the beginning of this period we likewise have two important new foundations. The first one is the university of Berlin, established in 1809, amid the most memorable circumstances, at the capital of Prussia. It was founded to off-set the loss of Halle by the treaty of Tilsit, and to demonstrate "that Prussia, instead of surrendering the function it had so long practised, that of striving above all else for a higher intellectual culture as the source of its power, proposed to begin anew; that Prussia—and this is doubtless equally important—would not allow itself to be isolated, but desired, rather, in this respect also, to remain in living union with the whole of natural Germany." Thus Schleiermacher, in the *Gelegentliche Gedanken über Universitäten* (p. 145), in which he drafts the intellectual charter of the new university, interprets the idea and the historical and national vocation of the new university of Berlin. Almost immediately after this occurred the removal of the old *Viadrina* from Frankfort-on-the-Oder to Breslau, where it was combined with the local institution and transformed into a great new university (1811). After the treaty of peace a new university on a large scale was established for the western provinces at Bonn (1818). The Kingdom of Bavaria also provided itself with a great central university at Munich (1826), in which the old territorial university of Ingolstadt, which had been removed to Landshut in

1800, continued to exist. A long line of prominent scholars from Middle and North Germany was called to Munich during the reigns of the first three Bavarian kings and did much to assist in planting the sciences in a field which had been, up to this time, controlled by the ecclesiastical orders. The Austrian universities, to mention this here, were not aroused from the torpor into which they had relapsed after the great reforms of the eighteenth century under Maria Theresa and Joseph II., until the storms of 1848, when they were brought into living relations with the German institutions by personal contact. The close of the period was marked by the revival of the old university of Strassburg by the new German Empire (1872).

On the other hand, a large number of German universities, some of which had been languishing for a long time, finally went under about the end of the eighteenth and the beginning of the nineteenth centuries during the storms of the French revolution and the subsequent reconstruction of the German States. Among them are some celebrated names: Erfurt, Wittenberg, and Helmstädt; and, among the Catholic institutions, Köln, Mainz, and Dillingen. Thus the political fate of states can be traced by the changes suffered by the universities.

The founding of the university of Berlin was in every respect a most important achievement of the Prussian state, which had been so cruelly conquered and had so bravely rehabilitated itself. This event was of especial significance because it showed the determination to hold fast to the old form of the university as an independent educational institution. Occurring contemporaneously with the reorganization of the French university system by Napoleon I., the new foundation was expressly organized in opposition to the French plan. Since the fate of the German university ideal was decided in those days, it will be profitable to dwell somewhat further upon this subject.

To supply the vacancy left by the revolution Napoleon I. had established, in 1808, the *université impériale*, an independent administrative body into which all the schools of every kind and grade, from the university to the primary school, with

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their directorates, were incorporated. In the place of the old universities, which had been swallowed up by the revolution, there arose independent and thoroughly organized professional schools, particularly for legal and medical instruction. The theological faculty disappeared, and the philosophical faculty, organized as a *faculté des sciences* and *faculté des lettres*, remained quite insignificant, often degenerating into a mere bureau of examinations for the baccalaureate. The juridical and medical faculties were organized after a military-clerical pattern, not for original scientific research, which had its place at the great laboratories in Paris, but to prepare available and reliable officials for the imperial service. Strict study-regulations and prescribed curriculums and examinations controlled the entire system, and the professors were nothing more than official state-instructors whose task it was to prepare the matriculated students for the examinations, which were held by the faculty as the official examining board.

At this time Prussia placed Wilhelm von Humboldt at the head of its school-system. His selection in itself gave evidence of the fact that Prussia had no inclination to imitate the conqueror in these matters. Humboldt's name, the name of a man in whom were combined to an unusual degree the qualities of a great scholar and of a statesman of high ideals, stood for a program: not military organization and discipline, but respect for science and its vital principle of freedom. It may safely be asserted that the new University of Berlin was expressly organized in direct contrast to the higher schools of the military Dictator. Its principle was to be, not unity and subordination, but freedom and independence. The professors were not to be teaching and examining state-officials, but independent scholars. Instruction was to be carried on not according to a prescribed order, but with a view to liberty of teaching and learning. The aim was not encyclopedic information, but genuine scientific culture. The students were not to be regarded as merely preparing for future service as state officials, but as young men to be trained in independence of thought and in intellectual and moral freedom by means of an untrammelled study of science. It was for this reason that the civil-service examinations were separated from the universi-

ties, and organized as special state examinations, having no connection with the academic examinations for degrees.

I cannot refrain from quoting a few sentences from the sketch of a memorial address in which Wilhelm von Humboldt, on assuming office, outlined his conception of the principles that should control the organization of a university. Von Massow, his predecessor, had, out of the "fullness of his heart," expressed the view that, instead of the antiquated and anomalous universities, "there should be only gymnasias on the one hand, and academies for physicians, lawyers, etc.," on the other, or preparatory schools and professional schools. In decided opposition to him, Humboldt wishes to preserve the universities in their old form as independent scientific institutions at which research and instruction shall both have their place. "Science is the fundamental thing, for when she is pure, she will be correctly and sincerely pursued, in spite of exceptional aberrations. Solitude and freedom are the principles prevailing in her realm." The state really has no other duty than to supply the necessary means and select the right men; it should never meddle with the university's internal affairs: "it should always bear in mind that it does not and cannot do her work and always becomes a hindrance when it interferes." The function of teacher and pupils is to coöperate in the promotion of knowledge. "The former is not for the latter, both are for science; his occupation depends upon their presence, and without them it could not thrive; if they did not voluntarily gather around him, he would seek them out in order more readily to achieve his goal by combining a practised mind, which is on that very account apt to be more one-sided and less active, with one which, though weaker and still neutral, bravely attempts every possibility."

"When only the function of teaching and disseminating knowledge is assigned to the university and its promotion to the Academy, injustice is manifestly done the former. Knowledge has certainly been as much, and in Germany even more, enriched by university teachers than by academicians. And it was precisely because of their position as teachers that these men were able to make such progress in their departments. For the unhampered oral lecture before

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an audience, in which there will always be a considerable number of independent thinkers, is certainly apt to enthuse one as much as the lonely desert of authorship, or the loose connection of an academic society."¹

Seldom has the result, that great arbiter in historical matters, decided so unequivocally between these two principles of organization of university instruction. In France the outcome was: the centralization of scientific life at Paris; the intellectual impoverishment of the provinces; the destruction of the philosophical faculty, the nursery of true scholarship; the transformation of the universities into professional state-schools with hard and fast instruction and without the scientific spirit. In Germany, on the contrary, there was an abundance of flourishing, independently developing seats of learning and scientific instruction, which competition constantly brought to greater efficiency, as well as an intellectual life well distributed throughout the entire country. Yes, even for the political life of the German people the free, non-political universities became important, immeasurably more so than the Napoleonic state-schools which every new government sought to exploit as a means for its own preservation. The German universities, as a whole, are the incarnation of the political instinct, one might say, of the good genius of the nation.

All this also in a measure explains the fact that the German universities of the nineteenth century have again achieved something of the old universality characteristic of the first universities; not, however, upon the basis of medieval church unity, but rather upon the basis of the unity of human civilization and scientific work, the unity based on the modern ideal of humanity. The confessional character of the old territorial university was completely repudiated. The territorial character was also surrendered, and the university became an institution for the free inquiry after truth, unhampered by restrictions of

¹ The address, which was never completed, is printed in A. Harnack's *Geschichte der Berliner Akademie der Wissenschaften*, vol. ii., pp. 361 ff. Compare B. Gebhardt's *W. von Humboldt als Staatsmann*, vol. i., pp. 118 ff. R. Köpke gives an excellent account of the founding of the University of Berlin and the events leading up to it, in his *Die Gründung der Universität Berlin*, 1860.

church or state. And, as a matter of fact, the old international character also came back, for just as in the Middle Ages students from every country sought the French and Italian institutions, so now strangers from the far west and the farthest east come to the German universities for scientific training. Truly, Wilhelm von Humboldt's assertion, addressed to the King in the general report upon the University of Berlin (May 23, 1810), has been justified beyond expectation. "The state, like the private citizen, always acts wisely and politically," he wrote, "when, in times of misfortune, it uses its efforts to establish something looking to future good and connects its name with such a work."

2. *Intellectual Forces and Tendencies.* In its influence upon the entire intellectual life, as well as upon the pursuit of knowledge and the form of instruction, the philosophical faculty stands foremost in the nineteenth century. It has, perhaps, more known and celebrated names in its roster than the other three faculties combined, and surpasses the others in the number of its teachers.

At the beginning of the period we are considering, philosophy stood in the foreground as the leading science. This was due to Kant, whose system, even before the close of the eighteenth century, had won the leadership at the universities from the Wolffian philosophy. As a matter of fact, Kant's central thought is not different from that of the Wolffian philosophy; the independence and autonomy of reason is the absolute demand of both. Kant and Wolff also meet in the belief in the rationality of reality, although Kant bases it on different grounds: in the categories of the reason we have also the fundamental principles of the world of phenomena; and in the ideas of reason we have the indispensable postulates for the construction of reality itself. Kant was followed by the speculative philosophy, which, too, was absolutely controlled by faith in reason, with its claim that the actual was objectified reason and therefore could be apprehended by it. Jena, Weimar's neighbor, was the first center of the new philosophy; here Fichte, Schelling, and Hegel began their important labors as academic teachers. Then the new university of Berlin took the lead, with Fichte among its intellectual founders and its

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first rector, and, subsequently, with Hegel, as its foremost teacher for more than a decade. Hegel exerted an important influence upon the entire Prussian educational system. Indeed, his philosophy might be described as the philosophy of the Prussian state during the second and third decades of the century, and that in a double sense: on the one hand it was the officially recognized philosophy of the government, at least of the Altenstein ministry; on the other, Hegel was the philosophical interpreter of the state as objectified reason. This condition came to an end with the accession of Frederick William IV., who hated the Hegelian rationalism and called the aged Schelling from Munich to Berlin to counteract it. He met with poor success, however. Along with Fichte and Hegel, Schleiermacher also exercised an important influence, both through his theological and his philosophical lectures. Herbart, as the representative of a different tendency in philosophy, was active at Göttingen and Königsberg. His positivistic tendency for a time gained considerable repute, after the decline of the Hegelian school, especially at the Austrian universities.

The new humanistic classical studies come next in importance among the intellectual forces of this period. F. A. Wolf, who quickly won first place from the aged Heyne at Göttingen, taught first at Halle, and later at the University of Berlin, which from its inception was intended as a chief seat of the classical studies, and has remained true to its purpose to this day. Here taught Boeckh, Lachmann, Haupt, Curtius, Mommsen, and others. Trendelenburg, the reviver of the Aristotelian philosophy, for many years an influential teacher, combined philosophy with the study of philology. Along with Berlin Bonn came into prominence as a nursery of philology; here Niebuhr, Weleker, Brandis, and Ritschl taught. Leipzig maintained its old reputation through Gottfried Hermann; Otfried Müller labored at Göttingen, and Fr. Thiersch at Munich.

Important, also, was the rise of new branches of philological investigation. Particularly worthy of mention is the establishment of Germanic philology by the brothers Jacob and Wilhelm Grimm, who lived and labored first at Göttingen, then at Berlin. Following closely upon this came the study of Ro-

mance philology, founded by Diez, at Bonn. The study of the languages and literatures of the Orient also received a mighty impulse: it will suffice to recall the names of Bopp, the founder of comparative philology, of Lepsius, the Egyptologist, both at Berlin; and of F. Rückert, the great linguist and poet, of whom Erlangen may be proud.

Of great significance, furthermore, was the wonderful advance of historical research. Here must be mentioned, first of all, the beginning of that great enterprise, the *Monumenta Germaniae*, in which Freiherr von Stein had such an important share, a work suited to satisfy both the sentiments of patriotism and the impulse to widen the confines of historical knowledge. This undertaking, which continues to grow and flourish even to this day, has become the standard of careful work for German historical investigation. Among the university teachers of the older period Niebuhr, at Bonn, and Ranke, at Berlin, must be mentioned above all others. They were followed by a long line of prominent pupils in the paths which they had marked out for the criticism and investigation of original sources. Somewhat later G. Waitz organized his historical seminar, in which a large number of the younger historians were trained. It may be added, also, that the historical instruction offered at the universities, and the historical literature of this entire period, very materially affected the political views of the leaders of the nation, and played an important part in the reconstruction of the political life in the new German Empire; I mention the names of Dahlmann, Häusser, Droysen, von Sybel, and von Treitschke. It was not by accident that so many historians, among them the venerable E. M. Arndt, played such conspicuous parts in the diets and parliaments in 1848-50: the German people had become accustomed to look up to them as their political leaders. Finally, C. Ritter, of Berlin, may here be mentioned, who raised geography to a science and added it to the university curriculum, where it now forms an important link between the natural and historical sciences.

Since the end of the second decade of the century the mathematical-natural sciences began to flourish along with the philological-historical studies. Gauss, the mathematician, and

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Weber, the physicist, taught at Göttingen. At Giessen, Liebig founded, with modest equipment, his chemical laboratory, the mother-laboratory of all those great laboratories which have secured for Germany the leadership in the domain of chemical research and technology. Johann Müller, who taught at Berlin, was the founder of the new school of physiology, which has produced so many prominent men. The triumph of the principle of the purely scientific explanation of the phenomena of life, as opposed to the natural-philosophical speculative explanation, was the work of Müller and his school; it placed medicine upon a scientific basis.

Thus the first half of the century was distinguished by a long succession of pathfinders and by epoch-making work. The second half was characterized more by a lateral growth. This is true of both the great fields of investigation, the philological-historical and mathematical-physical. A great mass of splendid energy was set in motion, and an infinite amount of efficient specialistic work was done. The accompanying phenomenon was the ever-increasing specialization of the fields of investigation, as illustrated by the constant multiplication of departments and chairs in the universities. Everywhere the number of professorships in the philosophical faculty was as much as doubled and trebled in the course of the century. Berlin began with twelve full professorships. It now has more than fifty in this department.

In the third decade of the century the interest in philosophy was repressed by the great rise of natural-scientific research. The speculative tendency, originating with Kant, but going beyond the limits he had fixed for it, and which with great boldness and even arrogance, undertook to construct nature and history *a priori* in the form of a logically necessary system, fell into contempt. As a matter of fact, for more than a generation philosophy stood under the ban of distrust and disdain, the result of the failure of its flighty enterprises. Only during the last decades did this contempt gradually disappear and philosophy again achieve a peaceful and fruitful relation with the sciences; the sciences themselves have begun to reflect upon their universal, philosophical presuppositions, and philosophy recognizes the obligation so to formulate its

thoughts that the sciences can accept them either as their first principles or their ultimate results.

If we should here attempt to outline the internal development of the other three faculties also, that of the theological faculty might be described somewhat as follows. At the beginning of the century theology was most closely connected with philosophy. The rationalistic theology depended first upon either the Wolfian or Kantian system, and later came under the controlling influence of the speculative philosophy. Schleiermacher occupied a unique position. On the one hand he was himself a philosophical thinker; on the other hand he sought to free religion from intellectualism and the philosophical admixture which he found both in the orthodox and rationalistic philosophies, by regarding it as a peculiar function of the human spirit; he recognized it as a creation rather of the heart than of the head. During the second third of the century the philosophical treatment of theology was thrust into the back-ground by two new mutually antagonistic tendencies. The first was the so-called positive theology, represented in Protestantism by Hengstenberg, of Berlin. It was the ecclesiastical concomitant of the great political reaction against the revolutionary period. In the Catholic Church this reaction found expression in the mighty restoration movement which came to a head in the dogma of papal infallibility in 1870, which represents the logical consequence of the idea of an authoritative unity of doctrine both in philosophy and theology. The other tendency was the historical-critical theology as it was represented by Baur and the Tübingen school within, and by David Strauss outside of the faculties. It is the thorough application of the strictly scientific treatment of the Sacred Scriptures as the literary remains of the history of religion. During the last third of the century a tendency emanating from Ritschl, at Göttingen, came into prominence in the theology of the faculties. It is characterized by its alliance with the critical philosophy of Kant, by its anti-intellectual and anti-metaphysical attitude, and by its corresponding inclination toward a practical Christianity, a Christianity of sentiment and deeds.

The development of jurisprudence might, perhaps, be simi-

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early outlined. At the beginning of the century we have here also the preponderating influence, first, of the Wolffian and Kantian, and then of the speculative philosophies, in the old theory of natural rights, and later in the new philosophical conception of law and the state. During the second third of the century, the philosophical treatment of law was checked by the interest in historical investigation, and the historical school, represented by von Savigny at Berlin and Eichhorn at Göttingen, won the leadership. Along with it arose a "positivism" which had a leaning toward theological-churchly positivism; in the university world this was represented by J. Stahl, of Berlin. More recently a tendency to return to the philosophical view seems to be making itself felt. Under the influence of the new social sciences, which were in turn vitalized by the socialistic criticism of society and the evolutionistic biology, interest in universal and fundamental questions concerning the origin and purpose of the state and law has been revived in jurisprudence, and the old theory of natural rights which was supposed to be dead and buried is beginning again to bestir itself, though in new forms. And here also the endeavor for a practical reform goes hand in hand with the teleological conception. I mention only the names of Lorenz Stein and R. Jhering.

The medical faculty too came under the controlling influence of the speculations of natural philosophy at the beginning of the century. With the close of the third decade these paths were, however, abandoned, and strictly natural-scientific investigation came in under the leadership of J. Müller. Represented by a long succession of brilliant names, of which I mention Schönlein, Dubois-Reymond, Helmholtz, Langenbeck, and Virchow, the new movement led to that astonishing progress which reinstated the medical faculty in the respect of the scientific world. The medical profession, which during the eighteenth century continued to be allied with the guild of cuppers and barbers, through the surgeons, secured the position in society which it still maintains. At the same time, owing likewise to the rapidly increasing financial prosperity of the population, there occurred an extraordinary growth of the medical departments. At the close of the eighteenth century

statistics show them to have been merely insignificant appendages to the theological and juridical faculties, while at present they are beginning to assume a position entirely equal and often superior to them, both in the size of their teaching corps and the numbers of their students. And in the budgets of the universities the institutes (laboratories) and clinics of these faculties next to the scientific laboratories, everywhere constitute the chief items of expense. It was in them that the new methods of investigation were perfected which have made such astonishing progress possible in the discovery of the nature and causes of disease, and with which, in turn, the astonishing progress in therapeutics has gone hand in hand. It can perhaps be said that the great discoverers and inventors in medicine are the best known and most celebrated men among the university teachers of the present day. Not the names of the originators of new philosophical systems, nor those of the masters in the domain of philological or historical criticism, but the names of the discoverers of new causes of disease and methods of cure are now in everybody's mouth. In these latter days, indeed, a change seems to be impending in medicine as in other fields. It may be described as a return to the philosophical view, for the one-sided physical view of the phenomena of life, to which physiology has so long inclined, is beginning to give way to a more comprehensive and philosophical conception under the influence of biological studies and theories. The belief is waning that it is possible to reduce all the riddles of life, both of body and soul, to a mere mechanics of atoms. A conception of the world is coming to the front which points through Fechner to Schelling and Goethe, and, further back still, to Spinoza.

3. *External Organization.* The new universities were well established at the beginning of the nineteenth century, and no vital changes have since been effected. Only a few survivals of old customs have died out. The academic jurisdiction, which had been retained through the eighteenth century, though as an expiring bit of medievalism, has finally disappeared. Its value as a means of preserving order was, doubtless, never great; and after the medieval scholar had been transformed into the modern student the academic tribunals

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were often totally helpless against the exuberance of the young gentlemen, and the fear of diminishing the attendance by a strict exercise of discipline gave them the finishing stroke. At present the student is an ordinary citizen like everyone else, except that the academic authorities still have certain disciplinary rights. The other medieval survivals have also died out. With a few exceptions the *convicta* have disappeared. Neither are there any longer any *pensions* in the homes of professors. The student is now thrown entirely upon his own resources as a free individual. Evidently, the fact that the average age of the students has constantly increased owing to the steady improvement and expansion of the gymnasia has had something to do with this. Twenty is now the average age at the first immatriculation. For men of 20 to 25 scholastic regulations and forms of instruction are impossible.

With respect to the division into faculties, the general scheme has been retained essentially unchanged to the present day, the occasional doubts concerning this "medieval" arrangement having been happily removed by the establishment of the Berlin university. At a few universities, however, the number of faculties has been increased, either by the addition of a second theological faculty to represent another creed, or by the separation of a faculty of natural science, or even a faculty of political science, from the philosophical faculty.¹

An important change has taken place in the relations of the faculties to each other. The philosophical faculty, whose task had been general preparation for professional study in one of the three "higher" faculties, has acquired a new position in the course of this century, without, however, entirely losing its former one. On the one hand, as already indicated, this faculty has become the real exponent of purely scientific research in all departments. On the other hand, it has assumed the task

¹ Tübingen led (1863) and Strassburg followed in the establishment of a separate natural-scientific faculty; in general, the preponderant inclination to preserve the old union has prevented further division, with the exception that sections have been formed within the faculty in Munich and Würzburg. A thorough discussion of the question is given by A. H. Hofmann, *Die Frage der Teilung der philos. Fakultät*, Berlin, 1880.

of professional training for a particular calling, that namely of the higher class of teachers. As late as the eighteenth century teaching in the higher schools was merely an adjunct to the clerical calling; candidates for orders usually engaged in teaching, unless, indeed, a private tutorship in a family happened to prove more attractive, before they entered upon their spiritual duties. Teaching has now become an independent, permanent profession. Since the middle of the century transfers to the clerical calling have been extremely rare. The reverse is more often true; candidates for orders frequently determine, for personal or other reasons, to take up the career of the teacher. The introduction of a special examination for teachers (the *examen pro facultate docendi*) in 1810, marked, in Prussia, the beginning of a radical separation of the two hitherto combined professions. The idea was to develop a class of *gymnasial* teachers trained for the duties of their calling, and inspired with a sense of professional pride. The necessary condition for the realization of this goal was the emancipation of the spirit of the times from theology and theological conceptions, and a devotion to humanistic ideals, the greatest exponents of which were Goethe in the world of general culture, and F. A. Wolf in classical philology.

4. *Instruction.* The general trend of development may be summed up in a few words: from the practical-dogmatic to the theoretic-academic. First of all, the conception of the university teacher's function which had begun to obtain during the eighteenth century was consistently carried out: not the mere transmission of a definite body of accepted truths, but rather the independent acquisition and augmentation of knowledge is now the goal. Even the students are to be trained as independent thinkers, and, whenever possible, as co-operating scholars. The old expression, *tradere*, has survived in our announcements of lecture-courses, but even the youngest *private docent*, and he, perhaps, most of all, would regard it as an insult if anyone were to take him literally.

The increasing specialization of subjects is a necessary consequence of this change. The number of chairs has constantly grown, and the field which one man can compass as an investigator and teacher is steadily becoming narrower. The union

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of such extensive and more or less heterogeneous subjects as took place everywhere in the eighteenth and even in the first half of the nineteenth centuries, especially in medicine and the natural sciences, but also in history, appears impossible and well-nigh incredible to us. Equally impossible seem the transfers from one professorship to another which frequently occurred, even in the eighteenth century, in the form of promotions from the poorer to the better endowed positions, but especially from the philosophical professorships to the more distinguished ones in the "higher" faculties.

In connection with all this another change took place; the attitude of the university professors toward practical occupations became different. It had hitherto been the rule for theological professors to hold ecclesiastical positions; the philologists frequently served as teachers or directors of schools; the jurists often became members of some board of justice (this entire faculty often enjoyed a respectable practice as a court of arbitration); and, finally, the medical professors, as a matter of course, were practising physicians. All these customs still survive in part, more especially in the medical faculty, but as a rule the university teacher has gradually forsaken active practice for the pursuit of pure science.

The result is that university instruction has become more and more purely theoretical. This is especially true of the philosophical faculty, but also of the medical, in which training in methods of investigation has become most important. The same must also be said, finally, of the two faculties which at an earlier period partook more of the character of professional schools, namely the juridical and theological faculties, and in which the accentuation of historical and critical study is now particularly characteristic. During the eighteenth century the essential thing was a dogmatic-practical course which bore directly upon the calling of the preacher or judge. But at present training in historical studies, and, when possible, scientific research including the investigation and criticism of sources, are considered most important.

The development of the theoretical or academical character of the university shows itself as much in the student as in the teacher. It is no longer considered the student's business

merely to acquire necessary professional knowledge from a few lectures and text-books, but to learn how to do independent scientific work. This change is reflected in the progressive improvement of the seminars and laboratories. During the eighteenth century, and even during the first half of the nineteenth, to study meant to attend dogmatic lectures in order to acquire, with their aid, an encyclopedic knowledge of one's subject. In the nineteenth century, the seminary system developed as a second great form of academic instruction, its purpose being to train the student in any given department sufficiently to pursue an independent methodical investigation of a problem. The extension of the period of residence at the university is a result of this higher goal. Another result is that the necessity for special practical preparation has gradually made itself felt in all the faculties. While formerly the university course was intended and shaped as a direct preparation for a profession, the distance between the purely scientific work of the university and the demands of the professions has become so great that the introduction of a transition stage has become indispensable.

All this will be referred to again. I merely remark, here, that the theoretical character of the university is most clearly revealed by the faculty of philosophy, in which research, above all else, is the controlling purpose. In the other faculties the dogmatic transmission of professional knowledge plays a greater rôle, and their exercises, such as the clinics of the medical, the homiletics of the theological, and the *practica* of the law faculties, are all, in the last analysis, technical in their nature. The philosophical faculty, on the contrary, is purely theoretical. Its teachers are the true exponents of scientific research and its students are the scholars of the future. Hence the entire instruction is of a purely theoretical kind. In the lectures and exercises there is scarcely anything to show that the hearers are destined for any other calling than that of the scholar. That, as a matter of fact, most of them intend to take up teaching as a profession, scarcely comes into consideration at all. The conviction prevails that the first and essential requisite for this profession is thorough scholarship. The examinations are of the same character.

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aiming almost exclusively at theoretical training and taking the form of special research. Hence the German gymnasial teacher looks upon himself wholly as a scholar, at least at the beginning of his career when university memories are most keenly alive in him. And the ablest and most active teachers preserve this spirit through life, more thoroughly than do the preachers and judges, the state-officials and physicians. These are almost entirely occupied with the practical demands of their profession, but the gymnasial teacher remains a scholar also in his profession.

And so it must, by all means, continue, if our gymnasia, our philosophical faculties, and even our universities, are to remain what they are. If the gymnasial teacher should cease to be a scholar and become simply a professional teacher, the philosophical faculty would likewise gradually degenerate into a mere professional school. And when this faculty ceases to be a nursery of pure science, the character of the entire university will undergo a change, because it is this faculty which constantly inclines it to the theoretical side. It is not by chance that the learned Academies are throughout Germany a kind of appendage to a philosophical faculty. And it also seems worthy of remark that the great universities of the United States, which were patterned after the German universities, are really identical with the philosophical faculties of the latter.

In concluding this retrospect I must not fail to call attention to the fact that of recent years a counter-current to this development, an undercurrent of hostility to the scientific activity of our universities, has made itself felt in many ways. Something like disappointment is perceptible because scientific research does not seem to redeem its promise to supply a complete and certain theory of the universe and a practical world-wisdom grounded in the very necessity of thought. Former generations had been supplied with such conceptions by religion or theology. Philosophy inherited this place in the eighteenth century. With what hopeful joy the generation of Voltaire and Frederick looked up to it. Hegel was the last heir of pure reason. Then a new generation, as distrustful of reason as the former had been of faith, turned to science with the expectation

that exact research would place us upon a sure footing and supply us with a true theory of the world. But that science cannot do. It is becoming more and more evident that it does not realize such an all-comprehensive world-view that will satisfy both feeling and imagination. It only discovers thousands of fragmentary facts, some of them tolerably certain, especially in the natural sciences, which at least supply a basis for practice; some of them forever doubtful, forever capable of revision, as in the historical sciences. The result is a feeling of disappointment. Science does not satisfy the hunger for knowledge, nor does it supply the demand for personal culture. It demands the investment of one's full strength and offers but scant rewards. Such disappointment is widespread. The chief bond uniting the followers of Nietzsche is after all this unbelief in science; periods of doubt are always the easiest prey of charlatans. But a feeling of resignation from time to time takes possession even of scientific circles, as may be seen from the concluding remarks of Harnack's *Geschichte der Berliner Akademie* (Volume I., pp. 791, 977).

Is it, as a few think, the premonitory symptom of the bankruptcy of science, its abdication in favor of faith? Or is it rather a natural demand for ideas, the long suppressed demand for philosophy that is coming to life again, but is not yet quite sure of its path and goal?

BOOK II

THE MODERN ORGANIZATION OF THE UNIVERSITIES AND THEIR PLACE IN PUBLIC LIFE

CHAPTER I

THE LEGAL STATUS OF THE UNIVERSITIES AND THEIR RELATION TO THE STATE

1. *Historical Orientation.* In law the German universities are state institutions. This seems natural and self-evident to us, but as a matter of fact it is the result of historical development which might have taken a different direction. Research and instruction are not, like war and peace, natural functions of the state. And they had their origin wholly outside of the sphere of governmental activity. The old schools of the philosophers in Greece, like Plato's Academy and Aristotle's Lyceum, the first form of organized scientific instruction, came into existence as purely private enterprises. The universities of the Middle Ages, likewise, began as private associations; and, although they soon acquired a public legal status, they still continued to be free, autonomous corporations which perpetuated themselves by the bestowal of degrees. Much that is peculiar to these older forms still survives on English and American soil. The modern North American universities are for the most part still purely private corporations, founded by private individuals and wholly independent of the state in the administration of their internal and external affairs.¹

¹ I refer to an article by E. Emerton (Professor in Harvard University) on "Higher Education in America" in the *Deutsche Rundschau*, November, 1900, which gives one an admirable survey of the whole subject. It is noteworthy that the development is taking an entirely different direction in America from ours. The universities over there are tending more and more to lay aside the character of state institutions which they had to some extent in the beginning; this taking place first in the eastern states, but now also in the western. The large endowments which they receive make them independent of state aid, and the result is that the administration also becomes

* In Germany the development of the university into a state institution was an historical necessity. As was previously explained, the German universities did not spring up spontaneously, but were founded by the governments. At first the state merely granted endowments and privileges; the internal affairs, instruction and examinations, were independently ordered and administered by the corporation. Since the fifteenth century, however, the authority of the governments began to assert itself in this direction also; they soon learned how to make their *ordinationes* and *reformationes* felt against the opposition of the corporations, which insisted upon their autonomy.

The ecclesiastical reformation then gave the Protestant rulers spiritual in addition to the secular power. The universities became government institutions whose function it was to train officials for the secular and spiritual administration, and the university teachers, with the title of professors, became salaried officials of the state. After the middle of the seventeenth century the sovereign power developed into a kind of governmental providence embracing all the purposes of civilization and welfare. The smallness of the German territories favored the conception of the state as a single great household under a "paternal" government. During the eighteenth century this conception became absolutely dominant. The German common-school system, with its compulsory attendance, has its roots in this principle. The sovereign, as the "father of his people," was also the head tutor of his subjects. The higher schools and universities were administered in the same way, and, as opportunity offered, new institutions were founded in harmony with the spirit of the age, such as the *Carolinum* at Brunswick

autonomous: a president and board of trustees and a board of visitors, elected from the members of the university (the graduates), attend to the business, elect the professors, arrange the course and examinations, etc. The faculties, however, exert a far-reaching influence upon the decisions of these bodies. A comprehensive presentation of the entire educational system of the United States, with historical and statistical matter, is contained in *Monographs on Education in the United States*, 2 vols., 1900, compiled for the Paris Exposition and edited by N. M. Butler. The instructive monograph on the universities is by Professor Perry, of Columbia University, New York.

and the *Carlsschule* in Württemberg. Everywhere the paternal governments interfered, by their regulations and admonitions, with the form and content of university instruction; the teachers were praised or censured according to the measure of their ability to carry out the ideas of the sovereign; they were told what books were to be used and which ones were to be abandoned, and received orders and directions concerning the method and spirit of their instruction, etc. The history of Prussian university administration under Frederick II., and of the Austrian under Maria Theresa and Joseph II. supplies us with apt examples. And it often happened that these orders, admonitions, censures, and threats, were addressed to individual professors in a tone not far removed from that of a schoolmaster toward immature and naughty boys.¹

¹ Particulars given by Bornhak, *Geschichte der preuss. Universitätsverwaltung*, pp. 99 ff; also in the histories of the several universities; especially Schrader's *Geschichte der Universität Halle*. A decree published in 1780, and addressed to Frankfort-on-the-Oder, contains, among many criticisms of things displeasing to the administration, censure of the philosopher and jurist, Darjes, a man not unknown to his time: "You, Darjes, lecture for a year on the *Institutiones*, but it is not to be supposed that you will relate any unheard-of things in the *jure positivo*, and if you, as is known from other *Collegiis*, spend the time with mere *allotriis* and *incongruitatibus* (sic), you are all the more culpable" (Bornhak, p. 135). With this may be compared a Cabinet order to the University of Halle in 1786, in which the faculty's objections concerning a change in administrative methods are rejected, since His Royal Majesty is not inclined to permit a few restless heads among the professors of Halle to criticise governmental arrangements and orders, because it is their duty to obey promptly and becomingly without demurring (p. 182). Add to this the order of 1798, which ordains that corporal punishment for certain student excesses shall be administered in the presence of the Rector, who must accompany it with paternal admonitions (p. 76). The military and police department of the state had assumed control of education. The longing for the "legal state," as indicated in Kant's and Humboldt's theory of the state, can be understood from this standpoint. It would, however, be unjust not to admit that the interference of "enlightened despotism" was on the whole, beneficial here also; it may be doubted whether the universities, owing to the sluggish inertia of the old corporations, would have been able unaided to pull themselves out of the mire in which they found themselves at the close of the seventeenth century. The history of the French and English univer-

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Two traits characterize the development during the nineteenth century. The first is the extraordinary increase of governmental activity and expenditure in behalf of the universities; the other is their enhanced internal independence and freedom. During the eighteenth century the Prussian ministry of education still found a legal basis for the universities in the provisions of the common law of Prussia: "Schools and universities are state institutions having for their object the instruction of youth in useful information and scientific knowledge." (Part II. Tit. 12, § 1.) During the nineteenth century the state's supervision of these institutions has constantly grown; a separate department has been established for their administration, with a minister of education at its head. The appropriations for all grades of instruction, especially for the universities and their scientific laboratories, have increased enormously. The university teachers have been placed on an equal footing with the state officials as regards their rights and duties.

On the other hand, the universities and teachers have gained much in the way of internal freedom; the eighteenth century's passion for regulating things no longer annoys them. The greater legal security which the general code gave to all state officials also benefited the professors, while with the beginning of the nineteenth century their original corporative independence was gradually restored to them. This development is connected with the fact already mentioned (p. 51), that the great, new Prussian universities were founded at a time when Freiherr von Stein, relying upon the spirit of the nation, led the Prussian people out of a bureaucratic absolutism into the paths

of liberty against the supposition. It is noteworthy that the French universities did not experience any reform during the entire eighteenth century. The state did not concern itself with them, so they vegetated until the Revolution put an end to their inglorious existence (L. von Savigny, *Die franz. Rechtsakultäten*, p. 19). I remark, further, that in passing judgment upon the policy of Frederick William II. and the attitude of Kant toward the prohibition of his religious-philosophical lectures, this fact must not be forgotten: during the eighteenth century it was the self-evident and universally exercised prerogative of the ruler to shape university instruction according to his own personal views and to demand obedience accordingly.

of independence. It is significant that the University of Berlin is described in the statutes not only as a state educational institution, but also as a "privileged corporation," whose supreme function was, as defined by its intellectual founder, W. von Humboldt, the free pursuit of knowledge.

By entering more and more directly upon the paths of scientific research under the leadership of a long line of celebrated men, the universities gradually ceased to be mere state institutions for the training of officials, and grew further and further away from bureaucratic control. While France reduced her universities to professional schools, Germany made her universities the embodiment of an independent scientific life, with the hope that an unfettered service of truth would not only be compatible with the interests of the state, but indissolubly linked with them. And even though this hope has been occasionally thwarted, especially during the unfortunate persecution of the liberals as demagogues (*Demagogenhetze*), when hardpressed ultra-conservatives succeeded in frightening the heads of government with the hobgoblin of revolution, and caused them to place the entire university system under police surveillance, and even to employ violence against several institutions, nevertheless, the relation of the state to the university has become one based essentially upon confidence in its independence. The principle of the freedom of learning and teaching, formulated in paragraph twenty of the Prussian Constitution, may really be described as one of the fundamental principles of our public law. The surer a government was of its ground, the more fearlessly it accepted this principle; and we may regard the independence of the universities as a criterion of a government's confidence in its stability.

Thus the development during the nineteenth century followed mainly along the lines pointed out by Schleiermacher. Schools and universities, so he says in the *Gelegentliche Gedanken über Universitäten* (p. 45), looking back upon the eighteenth century, "suffer, the longer, the more keenly, from the fact that the state regards them as institutions in which the pursuit of knowledge is not to be carried on for its own sake, but for the benefit of the state, and that it misunderstands and hampers their natural endeavor to conform to the laws imposed upon them by

science." And, anticipating the future, he declares that "the guardianship of the state, which was probably necessary at an earlier day, must, like all guardianship, come to an end some time; the state should leave the sciences to themselves, committing all the internal arrangements entirely to the scholars, and reserving for itself only the economic administration, police superintendency, and the study of the immediate influence of these institutions upon the civil service."

At the celebration of the two-hundredth anniversary of the University of Halle, in 1894, Emperor Wilhelm II. subscribed to this view in the following memorable words in his address of welcome to the university: "It will never be forgotten that this university was the first clearly to recognize the essential connection and fruitful relations between academic instruction and free research, and thereby established a principle which has become an inalienable heritage of all the German universities and largely determines their modern character."

2. *Present Status and Organization.* The legal status of the universities, therefore, has the following characteristics, which are generally uniform in all the German states.

The universities occupy a dual position: on the one hand, they are state institutions, and on the other, they have the character of free scientific corporations. As state institutions they are founded, supported, and administered by the government. From it they receive their organization and laws. The regulations governing the universities and the faculties are passed by the government, usually with the advice of the corporations. In Prussia the faculty statutes are prescribed by the ministry of education. The government also defines the function of the universities and grants them their privileges. The Berlin statutes thus define the function of the university: "to continue the general and special scientific education of properly prepared youths by means of lectures and other academic exercises, and to fit them for entrance into the several branches of the higher civil and ecclesiastical service." Among the privileges peculiar to the university is that of conferring academic honors. This privilege is now granted by the state, that is to say, by the different states severally, without the coöperation of a higher authority like the papal and imperial in the Middle

Ages. Legally, therefore, there would be nothing to prevent, let us say, the municipality of Hamburg from founding a university with the right to create doctors *sub auspiciis senatus populique Hammoniensis*.

The wish has been expressed that the universities, for the sake of greater uniformity, especially in the promotion of professors, be placed under the control of the imperial government. But I do not think that this demand will meet with the approval of intelligent persons. If decentralization is possible and necessary anywhere, it is so in the field of state supervision of intellectual culture. The independence of the several states has kept alive a spirit of competition which has shown itself to be a wholesome incentive. Nor has it been less favorable to the internal freedom of the universities: for every proscribed professor there has always been found another chair beyond the boundary of the state, as in the case of the seven teachers at Göttingen, and the men driven from Leipzig after 1850. And the independence of the university teacher depends in no little measure upon the fact that, in case he becomes impossible in a certain place, he can go elsewhere and establish a sphere of usefulness for himself under a different administration.

In distinction from the intermediate and lower grades of schools, which are administered by the provincial officials, the universities are under the immediate control of the ministry of education. In Prussia, however, each provincial university has a curator, who is the resident representative of the central authorities; his duty is to exercise, in behalf of the state, a general superintendence over the institution and to watch over its welfare and efficiency in every way. It is through him that communication is had between the university and the ministry. A man with the requisite gifts for such a position can be of considerable service to a university. For it must be admitted that, owing to the constant change of academic officials and the limited business capacity of many scholars, a university's efficiency as an administrative body cannot be rated very high.

That is one side of the case. But the universities are not only state institutions, they are also independent corporations of scholars. This becomes evident everywhere in their form of

government. Because of their organization and the independence which they enjoy they occupy a position within the state which can really be described as exempt. Historically this position is traceable to their origin as corporate bodies; in fact, it is due to the peculiar nature of their function. Of the autonomy of the old *universitas* they have above all retained the unrestricted choice of academic officers. The head of the university, the rector, is always chosen annually by the full professors, and is one of their number. He represents the university in its external affairs; the university officials are subject to his orders; he has charge of the immatriculation of students; and he controls the societies and the meetings of the student body. In like manner the Senate is formed by election from the corps of full professors. In the Prussian universities, in addition to the elected members, the rector, as chairman, the university judge, and the deans are *ex officio* members of the Senate, which forms a general executive committee. Of the old academic jurisdiction the control of discipline has been retained. It is lodged with the rector and senate. By way of punishment the following penalties can be imposed: fines, not exceeding twenty marks; incarceration (*Karzer*), not longer than fourteen days; threat of rustication (*Verweisung*); rustication and expulsion (*Exklusion*). Although the authority of the elected heads of the universities is a modest one, and the office in general, when compared with the position of a president of an American university, is rather of an ornamental character, it is nevertheless not entirely without significance. Imagine at the head of the university an official appointed by the government, like the *recteur de l'académie* in France, a man, let us say, in the position of a provincial school director, and the difference becomes at once apparent. The German rector is the visible symbol of the corporate independence of the university.

* The different faculties also possess important functions as self-governing bodies. The full professors, who are the faculty's administrative body, annually elect one of their number as dean to act as their presiding officer. The faculty has oversight of the behavior and studies of the students, though in a scarcely appreciable way. It manages the benefices and conducts the

examinations prescribed for them, announces the subjects for prize-essays, and awards the prizes. It also has supervision of instruction and must, above all, see to it that all subjects are fully represented during each semester, and suggest additions to the teaching staff, whenever necessary. Again, and most important, it holds the examinations for the academic honors and confers the degrees through the dean. It also extends the *venia legendi* to young scholars, which means that it confers upon them the privilege of teaching in the faculty as private docents, admitting them thereby into the larger academic teaching-corps. Finally, when a vacancy occurs in a chair it must nominate candidates for the vacancy to the ministry of education. In a certain sense, therefore, the *corpus academicum* still continues its existence by a kind of coöptation.

A similar exemption, finally, appears in the official activity of the individual. The instructor in a university enjoys an independence in the form and content of his duties that is not equalled by that of any other government office. Upon his appointment a professor receives a wholly general commission to teach certain branches, and he is allowed to interpret this commission for himself; he decides for himself what lectures and exercises are to be offered, the number of hours to be devoted to every subject, the topics to be treated, and the methods to be followed. He is merely bound to deliver at least one private and one public course of lectures during each semester. There are no official courses of study as in the schools. There is no supervision of the efficiency of the instruction; no revision by supervising officials, and no statements of accounts, except by the laboratories.

3. *The Legal Relations of University Teachers.*¹ The teaching-corps of a German university comprises two kinds of teachers, whose legal status is thoroughly distinct: 1, professors, who are appointed and paid by the state; 2, private docents, or independent instructors upon whom the faculties have bestowed the privilege of teaching, but who have no official duties and receive no salaries.

A distinction is also made between professors: the ordinary

¹ C. Bornhak, *Die Rechtsverhältnisse der Hochschullehrer in Preussen*, 1901.

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(*ordentliche*) or full professors, also constitute the administrative body, while the extraordinary (*ausserordentliche*) professors take no part in the administrative affairs of the university or faculty. The distinction between regular (*etatsmässige*) professorships and so-called personal (*persönliche*) professorships ought also to be mentioned. The former are fixed and continuous, and vacancies in them are filled upon nomination by the faculty, while the latter expire with the occupant. There is, further, the distinction between salaried and unsalaried extraordinary professors; when private docents have for a time taught successfully, and a salaried position is not open, it is customary to confer upon them unsalaried extraordinary professorships as a mark of recognition and with reversionary rights. Of recent years merely the professor's title is frequently given. Finally, the honorary professors must be mentioned. They have the rank of extraordinary professors, but have neither a definite duty as instructors nor salary, in which respect they are like the private docents. As a rule they are old and worthy men who are, in this way, publicly brought into independent relation with a university.

The professors, both ordinary and extraordinary, are state officials. They are appointed by the government and receive from it the commission to teach a certain subject, or a group of subjects. Rights and duties are defined in a general way by the statutes of the general code governing all civil officials. Like other offices, that of the teacher is conferred without a time limit; the performance of duty carries with it a permanent claim upon the privileges of the office. Unlike other offices, pensions are unknown to the academic teacher. Instead of them, there is a release from the duty of lecturing, with a continuation of salary. In other countries, Austria, for example, seventy is fixed as the age-limit for the occupant of a professorship, after which a successor is appointed; but the former occupant retains not only his salary but the privilege of lecturing. There are good reasons for such an arrangement. It may be taken for granted that the strength and inclination for academic teaching either become exhausted or impaired at the age of seventy. And because it is by no means advisable to allow the person in question to decide when this period begins for

him, for self-delusion on this point is common, as we know, and because, on the other hand, the compulsory pensioning of some particular individual would be especially painful and insulting, the legal enforcement of an age-limit would, perhaps, be the most appropriate solution. In case, as might occasionally happen, an efficient professor should in this way be retired too soon, the loss would not be so great as if an inefficient man should direct a department or a laboratory for years, thereby lowering the standard of instruction and standing in the way of rising talent.

It remains to be said that compulsory transfers, such as necessarily occur in the interests of the service in other lines, are unknown in the universities.

The ministry of education has supervision over the university professors and the performance of their duties. But in the ordinary course of events this supervision is scarcely felt at all by the individual professor, and by him less than by any other government employee. Especially is there no sort of interference with the performance of official duty, except, indeed in the maintenance of public order. It may be truly said that at no time has university instruction enjoyed a wider freedom, not even during the period of corporative autonomy in the Middle Ages, or perhaps there was less freedom then than now, for the instruction consisted almost entirely in the transmission of approved doctrines. Afterwards government regulation came into prominence, reaching its highest point during the eighteenth century. Attempts to determine the content and form of instruction by prescriptions and commands, which were then of almost daily occurrence, are at present entirely out of vogue. The university teacher is now left practically entirely to his own judgment and conscience. It is only by means of the regulations governing state examinations, that a certain influence is exerted upon the system of instruction, such influence being particularly noticeable in the law faculty.

All this is the expression of the conception of the university which became dominant during the nineteenth century. If a university is primarily a scientific institution, its freedom must be taken for granted. The state has become convinced that its political authorities have not the capacity for the recognition of

scientific truth, and therefore allows science to regulate its own affairs. And with the content of instruction the form is so closely connected that it cannot tolerate control by means of general regulations, except, indeed, in purely external things.

Although, therefore, the content and method of university instruction lie beyond the influence of the controlling authorities, this cannot be said of the formulation of the commission to teach. It is not contrary to the principle of liberty in teaching that the ministry of education should designate somewhat precisely the needs which appointees are expected to satisfy, and call attention, also, to newly emerging demands and see that they are met. Owing to their scientific character the universities are apt to assume a rather indifferent attitude toward the needs of the student from the point of view of his future calling and the state examinations. This is true for example of the philosophical faculty. The school administration has not infrequently had cause to complain that the instruction in philology paid too little attention to the needs of future teachers in neglecting the most necessary branches and authors. Thus it recently became necessary to supplement instruction in mathematics by adding descriptive geometry and applied mathematics, in order to equip the teachers of the *Realanstalten* and technical schools with the necessary knowledge and skill. Hence the task of seeing that the necessary instruction is offered, by controlling the commission to teach, cannot be surrendered by the central administration to the individuals and the faculties themselves.

So far as discipline and misconduct in office are concerned, the same regulations apply to university professors in Prussia as to all officials outside the judiciary. The disciplinary law of July 11, 1852, for such officials fixes their general duties, transgressions, and penalties. Penalties (warning, reproof, fine) can only be imposed by the minister, transfer to another position with a smaller stipend and dismissal from office can take place only after process before a court of discipline in the first instance and before the ministry in the way of appeal. Transfers for punishment, however, as well as transfers for the good of the service, are evidently contrary to the entire nature of the office and the university system; and, so far as I am aware, such punishment has never been imposed in Prussia.

On the other hand, the second section of paragraph two of the disciplinary laws, which declares that an official who "because of misconduct in or out of office becomes unworthy of the respect, consideration or confidence which his calling demands" shall be subject to discipline, used to be frequently applied in order to punish professors for assuming a position antagonistic to the government. And this was, presumably, the intention of the framer of the law, for it dates from the period of reaction when the increase of governmental authority seemed to be the one essential thing. Whether the application of the law has had this result is, however, open to question; the power of a ministry may have been momentarily strengthened by it, but the authority of the government can scarcely have benefited thereby. I remind the reader of an apt comment by H. von Treitschke: In the moral world nothing can serve as a support which cannot at the same time offer resistance. And professors are not and ought not to be political officials; hence their duties cannot be measured by the same standard as that which is applied to district-presidents and presidents of governments. But this subject will be resumed in a later chapter on the liberty of teaching.

4. *The Appointment of Professors.* This is brought about throughout Germany by the state governments; in Prussia the sovereign himself appoints the ordinary professors, and the minister of education the extraordinary ones. The faculty, however, has the right, based upon tradition and also, for the most part, upon statutory regulations, to coöperate in the appointment, in the following manner. When a vacancy occurs in a chair, the faculty suggests, as a rule, the names of three men who, in its judgment, are suitable for the position. But the government is not bound to confine its choice to these names, and, as a matter of fact, they are not infrequently disregarded in that neither the faculty's first choice, nor, indeed, any one of the men suggested receives the appointment. And for the first appointment to a newly created chair the faculty's right to make nominations is, generally, not recognized at all.¹

¹ According to a report in the *Nordd. Allgem. Zeitung*, December 5, 1901, 311 appointments were made in the theological faculty between 1817 and 1900, 209 upon the recommendation of the faculty, and 102

This procedure, which developed quite uniformly in the course of the nineteenth century, though with many individual peculiarities—during the eighteenth century there were greater variety and arbitrariness: in some cases the corporation filled the vacancies itself and the government formally ratified the action, in others professors were appointed without so much as consultation with the faculty—has frequently become the object of bitter criticism and complaints. Failure to consider their recommendations is felt by the faculties as a scarcely endurable disregard of their judgment or sense of duty, and is usually attributed to political influences or personal favor. On the other hand, the professors have frequently been reproached with the fact that their recommendations are not always determined by the candidate's ability, but by all kinds of personal considerations, and family and university connections. It is charged that flattery and obsequiousness, intrigue and kitchen-politics find a wide field here.

The charges against the faculties, so far as I can judge, emanate largely from those who have been disappointed, and must, therefore, be received with caution as tinged with personal bias. Naturally, mistakes and human weaknesses play their part in the recommendations; it sometimes happens that the real interests of the case are crossed by personal interests and considerations; likes and dislikes, due to general and personal causes, also influence the judgment. Where in the world would it be possible to rule out such things altogether? On the whole, however, in my opinion, the faculties may well claim that they are impartial and conscientious in their recommendations. One may as well accept the fact once for all that it is impossible to escape slander whenever the judgment of individual merit is followed by practical consequences.

without or against the recommendation; 432 in the juridical, 346 upon recommendation, 86 without or contrary to such recommendation; 612 in the medical, 478 upon recommendation; 134 without or contrary to it. For the years after 1882 the figures are: in the theological faculty, upon recommendation 82, without or contrary 38; in the juridical, upon recommendation 125, without or contrary 15; in the medical, upon recommendation 207, without or contrary 29.

There is a survey of the several procedures for the filling of professorships in Billroth's *Lehren und Lernen*, pp. 280 ff.

This is also largely true, so far as I can see, with regard to the occasional complaints of the faculties against the arbitrariness of the administration. Here too mistakes are made, which can, for the most part, be traced back to illegitimate political influences. But as a rule the German universities have no just cause for complaint. They cannot and do not wish to deny that the men who have had and still have charge of their administration, are governed by a conscientious concern for the welfare of the whole as well as by a kindly interest in individuals. And in reviewing the past they must themselves admit that the rejection of their nominations has not in every case been unjustifiable.

It may therefore be asserted that this method of appointing professors suits our conditions; for us there is probably none better suited to secure the end of putting the right man in the right place. Promotion by seniority, possible in other departments, although a very dangerous method of procedure everywhere, would certainly be a serious menace to the efficiency of the university, at least unless it were counteracted by a merciless elimination of the incompetent. The custom of canvassing for positions by submitting testimonials and opinions, both public and private, which prevails in the north, and in America, or even by competitive examinations and public trial-performances, such as tradition demands in the Latin countries, would surely not be the proper way to secure the recognition of ability under our conditions. On the contrary, the effect would be to exclude precisely the ablest from the competition. Nor would the dignity of the calling be increased by such methods. Candidating for vacancies would not be advisable even from this standpoint. To be sure, candidating occurs in Germany also; but it is certainly not an open and recognized system. One is ashamed to offer oneself as a candidate. And there are not wanting men who can adopt the statement made by W. H. Riehl, the historian of civilization, in his autobiography: "I have never in my life sued for anything except my wife's hand."

The results of the coöperation of faculty and government may now be described somewhat more definitely. The right of nomination by the faculties guarantees the scientific ability of the appointee. It prevents the development of a ministerial

absolutism, which, as things now are, would greatly increase the influence of the controlling political parties in the appointment of professors in certain departments, a privilege which, as every one knows, is coveted on every hand. The faculty's official advice is both a check upon the minister's own partisanship and a protection against the political pressure which is brought to bear upon him either by the court or the house of deputies. And in the case of the non-political professorships the influence of particular private advisers would increase, for the minister or his representative (*Referent*) could not, as a matter of course, form a personal judgment concerning all the departments, and would, therefore, have to seek the advice of some one whose judgment he could rely on, and this might lead to a kind of secret and irresponsible autocracy of the leader of a school. To be sure, such private counsel is not entirely excluded now, and it has its legitimate place; but the administration also listens to the judgment of others, of appointed and responsible counsellors. On the other hand, appointment by the government is a simple necessity. It is a right which belongs to it because the state establishes, and provides the funds for, the positions. But it is also the only practicable method. The appointment of professors by the faculty would certainly give the sects and coteries, the intriguers and "kitchen-politicians" a pernicious influence. To this must be added that the central administration alone is able to survey the entire university system of the land, to consider its needs and the available men at its disposal, and finally to have a due regard for personal relations and interests. The numerous faculties cannot conduct a central administration; even a particular faculty is scarcely qualified as an administrative body. The faculties should not forget this when the administration rejects their nominations. Nor should those forget it, on the other hand, who accuse the faculties of wholly overlooking efficient men in their nominations, thereby exposing them to ruin. The faculties, or rather a particular faculty, can only be held responsible for finding and nominating a suitable person, and not for the fact that all efficient men are not employed. It is the business of the administration carefully to guard against hardships in this connection.¹

¹ This paragraph was written before the bitter charges against the man who has for many years stood at the head of the Prussian univer-

5. *Salary and Honorarium.*¹ A professor's official stipend comes from two different sources: he draws a salary from the state and also receives compensation from attendants upon his private lectures. The most recent regulation in Prussia, dating from 1897, fixes the initial salary of an ordinary professor at 4000 marks (Berlin 4800), of an extraordinary professor at 2000 (Berlin 2400). These figures are increased five (at Berlin six) times, at intervals of four years, by the addition of 400 marks each time. There is, in addition, an extra allowance for domicile of 540-900 marks. The income from the *honorarium* or fee varies exceedingly, depending upon the subject taught, the attendance, and the number of lectures, as well as the personal drawing-power of the teacher; it fluctuates between a few hundred and many thousand marks. The large incomes from the honorarium are found especially in the large law and medical faculties, also in a few departments of the philosophical faculty. In order to give the reader a statistical basis for what follows, as well as to guard him against exaggerated statements, I supply a few data. During the session of 1894-95, 191 ordinary professors of the Prussian government received, each, as much as 1000 marks from the honorarium, 87 received as much as 2000, 74 as much as 4000, 59 as much as 6000, 27 as much as 8000, 14 as much as 10,000, 15 as much as 15,000, 7 as much as 20,000, and 4 more than 20,000.

Because this system, especially the honorarium, is the object of constant attacks, I shall deal with it in some detail. And because it cannot be properly understood without considering its historical beginning, and because, also, its origin is used to cast suspicion upon it, I shall first say something about the evolution of the system.

In the medieval universities instruction was paid for by an honorarium. As a rule, however, the teachers in the higher faculties also held benefices and a number of the masters of arts had places in a *collegium*. With the advent of humanism

sity system were published, which recently caused such an animated newspaper controversy. It has not caused me to change my opinion.

¹ Bornhak, *Die Rechtsverhältnisse der Hochschullehrer*, pp. 49 ff. L. Elster, *Die Gehälter der Universitätslehrer und die Vorlesungshonorare* (from Conrad's *Jahrbücher für Nationalökonomie*, 1897), gives the status before the reform in Prussia.

it frequently happened that the sovereign would secure, for a shorter or longer period, the services of a teacher, sometimes a foreigner, to give public lectures on the new arts in addition to the ordinary course offered by the faculty. During the sixteenth century, at the time when the curriculum was changed, when the humanistic branches were admitted, and the entire university system came under state control, salaried lecture-ships in all the faculties were systematically provided for, and the professor was expected to deliver, gratuitously, all the lectures necessary for the examinations, generally four times a week, in the faculty's *lectorium*. But in addition to this public and gratuitous instruction private instruction for a consideration continued to be customary, especially on the part of younger and unsalaried masters of the philosophical faculty. This was all the more necessary because the preparation of the scholars was very unequal and often very insufficient. But there was nothing to prevent the salaried professors from offering in addition to their public lectures, private instruction for a fee. Since the middle of the seventeenth century private instruction became more and more prominent, and that at the expense of the public lectures. With the depreciation in the value of money and the uncertainty of payments, the salaries proved wholly inadequate. The students, especially the jurists, who were constantly growing in numbers and represented the new aristocracy at the universities, looked upon private instruction as more respectable and effective. In the course of the eighteenth century the private lectures gradually came to be regarded by both sides as the really important part of the instruction; the new universities, Halle and especially Göttingen, led the way here also. But the public lectures continued to be obligatory. The private lectures were also characterized by the fact that they were always given in the professor's own house. The fixing and collection or remission of the honorarium was the individual's private affair.

In answer to certain malicious statements that the insatiable greed of the professors had surreptitiously increased the salary by the addition of fees in the eighteenth century, I add the following remarks. The development of the lecture system in the direction described was most intimately connected with the gen-

eral conditions, especially with the inadequacy of the appropriations. The University of Halle, during the eighteenth century by far the foremost and best attended of the Prussian universities, from its foundation up to 1787 drew not more than 7000 thalers annually from the public funds, Königsberg somewhat more than half of that sum, and Göttingen, somewhat more than double that sum from the very beginning. Out of these amounts the salaries of all the professors as well as the incidental expenses, which, however, were not very heavy, had to be met. It becomes at once apparent that the government could never have intended the professors to depend upon their salaries for their entire income. These were merely intended, as in the case of most of the other offices, as a fixed basis for a livelihood, which, it was assumed, would be supplemented by a further variable income from their work. The honorarium of the professors corresponded to the fees and perquisites of the officials. The theologians generally also received incomes from spiritual offices which, at that time, were still usually connected with professorships. The jurists derived incomes from opinions and probably also from judgeships, while the medical men engaged in practice. The philosophical faculty, on the contrary, had to depend almost entirely upon the honorarium from private lectures, while after it came the law faculty, which really had the students who were best able to pay.

And these private lectures were taken into account in the new organization of instruction. The old public lectures had consisted of continuous interpretations of canonical books. Each professor lectured about four times a week, and this constituted his entire teaching. The one public auditorium of the faculty served as a lecture-room which the different teachers used in turn. With the growth of the sciences and the successful introduction of the new system of instruction, and the systematic presentation of subjects in semester courses, it followed as a matter of course that the number of lectures should be largely increased, and that each professor should be expected to treat a number of subjects in private lectures in addition to his official public courses. Indeed, it was made his duty so to do by the supervising authorities. It is quite comprehensible that with such an arrangement the public lectures should have

gradually given way to the private ones requiring a fee. The wholly inadequate arrangements of the public auditoriums, about which bitter complaints were frequently made, for example, that they could not be heated and could, therefore, not be used during the severe winter months, contributed their share in making the professor's private auditorium the real place of his activity as a teacher.

One may, therefore, be allowed to say, without arguing for the ascetic unselfishness of the professors,—to be sure, specimens of the species financier have never been wanting among them—that the gradual transformation of public and gratuitous university instruction into private instruction for an honorarium was a process in which the interests of the students and the wishes of the supervising authorities, as well as the necessity of supplementing the salary of the professors by means of extra work on their part, each played its part. The entire process might be described in a single sentence: during the eighteenth century the cost for the improved academic instruction was shifted from the state (in the form of professors' salaries) to the students, or rather to their families: a process which certainly does not supply any occasion for moral indignation. The fact that the private lectures with their fees did more to arouse the zeal and diligence of both teachers and students than the traditional lectures, seems to have given the new system its final justification.

The nineteenth century received this system from its predecessor, and so improved upon it, that the private lectures now form the principal part of a professor's official duty. These lectures, like the public ones, are also held in the university buildings, and the collection of the honorarium is secured through an official bureau (the *Quästur*). The old public lecture courses, on the other hand, which, down to the eighteenth century, and in some few instances (for example at Königsberg), far into the nineteenth, treated some fundamental subjects about four times a week, have been changed into the so-called *pública*, in which it is customary to present subjects of general interest to a larger circle of hearers once or twice a week. In addition, there are the seminars, which are always given gratuitously, whereas formerly the *privatissima* were well paid,—an

important substitute for what has been given up; there is certainly no ground for the assumption that the expenditure of time and strength now necessary for conducting these exercises is less than what was formerly required for four hours of text-interpretation.

In this way there arose the system of double remuneration in university instruction, which is so offensive to many at present. That, besides, the honorarium is not overlooked in the fixing of salaries, may be inferred *a priori* from the dutiful spirit of economy animating the ministry of finance, but it is also plainly enough evident from the figures themselves. In 1896, prior to the new salary regulations, 96 out of 492 full professors in Prussia received a salary amounting to 4000 marks, 217 received 5800, 101 6700, and the remaining 78 more than the last figure.¹ It can be seen that without the addition of the honorarium the income of the professors, compared with what can be earned by physicians or in the civil service, or even by technically trained employees in industrial and commercial concerns, would be altogether inadequate. And even with the honorarium the average income may be described as modest. We should not allow the fact that a few men draw great prizes in the academic career in the form of salaries, fees, and additional incomes, to deceive us in this matter.

Against this arrangement, which certainly has never been without opponents, a literary storm arose a few years ago. It came at a time when efforts were making to secure certain changes in the Austrian and Prussian university administrations. The lecture honorarium was characterized as a public scandal: for the same service, it was said, the professor first draws a salary as an official, and then also an honorarium as a private teacher; and finally, to cap the climax, the requirements for the examinations compel the student, if not to hear the lectures, at least to pay the honorarium for them. On the other hand, the unsalaried private docent is really compelled to lecture gratuitously, for even though the student should prefer his courses, he would not care to pay a double honorarium. Hence—the critics argued—this system, with the amazing inequality in salaries for which it is responsible, is the very acme of social

¹ W. Lexis in the *Akadem. Revue*, January, 1897.

injustice and perverse order. Its cause, however, is the avarice of the professors, who have succeeded in doing away with the public lectures, to which they are obligated by their salaries, and to substitute the private ones in their stead.¹

I am not blind to the defects of the present system. There has been and is an inequality of income among the academic teachers which does not occur in any other organized public calling. It is an inequality, moreover, which is not always grounded on a difference in productive and teaching capacity, and for that reason if for no other is bitterly resented, not only openly, but secretly. Nor can it be denied that the system has a tendency to increase the sordid desire for money-making, that it now and then offers a temptation to abuse the position of examiner to this end, and that it also affects the discussions concerning necessary reforms in the organization of instruction, and even plays a part in the matter of appointments. Nor do I care to dispute the assertion that the multiplication of official perquisites supplies an income in a few instances

¹ *Die akademische Laufbahn und ihre ökonomische Regelung*, 1895. In this, at first anonymously published, article by a Berlin professor (G. Runze), the prevailing system is attacked by the skillful use of particular facts and with persuasive eloquence, and its abolition by the political authorities demanded. The author of this article is seconded by E. Horn in a historical account, *Kolleg und Honorar*, Munich, 1897, concerning which I have made some statements in the *Preuss. Jahrb.* (January, 1897). A characteristic feature of these, as of other articles on university reforms—and the case could be still further generalized—is that existing arrangements are pictured in dark colors, while, on the other hand, the conditions to be brought about by the reforms are painted in the brightest colors. When the present conditions are referred to the professors are made to appear as imperious and greedy individuals who arbitrarily use their power to increase their sources of income and to shut other persons out. Just as soon as the *honorarium* is controlled by the state, it is supposed that an incorruptible idealism will spring up in the same individuals: from purest sense of duty and consecration to the cause they will live wholly for science and the education of the youth. In the same way, according to the social-democratic doctrine, as soon as private property is abolished all men will be transformed into virtuous and peaceful comrades, striving only for the general good. It is the universal weakness of idealists to suspend the causes that work in opposition to their system. If only nature would be agreeable!

which far transcends even the most ample requirements of a scholar.

Notwithstanding all this I am fully convinced of the wisdom of the system of the private honorarium in academic instruction. And it is my opinion that the Prussian university administration deserves commendation for refusing to follow Austria's example in the governmental control of the honorarium. In 1896, in spite of strong opposition in university circles, the Austrian ministry of education did away with the honorarium (which, however, was not historically so well established there as in North Germany) and substituted for it the payment of salaries from the university funds, compensating the professors for the difference by an increase in salaries. The Prussian government did not follow this example, although some expected it to do so. After a careful consideration of all the circumstances it concluded to keep its reform within modest bounds. The law of 1897 made two changes that belong together: the introduction of the system of periodically increasing salaries according to length of service, and the division of the honorarium whenever it reaches a certain figure. When the honorarium goes beyond 3000 marks (in Berlin 4500) one-half of it belongs to the government, as a partial recompense for the increased expenditure for salaries.

In my opinion, both innovations deserve approval. Certainly the first: because by the system of a fixed initial salary and the periodical increase (figures are given on page 87) the academic teacher has become more independent in every respect. The old system of fixing the salary by individual agreement made the professor dependent for this salary and an increase upon the good-will of the administration and his own ability to enhance his value by a recital of his gifts, the urgency of his suit, or by securing calls from other institutions. Under such a system, those whom nature had not endowed with the *donum impudentiae* would necessarily get the worst of the bargain. That such persons fare better under the new system must be regarded as a gain, and it is a further gain that the bargainings over the terms of appointment will tend to become less frequent, and that the desire for calls and perhaps also for changing from university to university will gradually disappear.

But the second innovation also, the cutting down of the large honorariums, seems to me to be commendable. If it makes the achievement of a millionaire's income somewhat more difficult for the university teacher, I do not consider that as, in any wise, a misfortune. A millionaire's income is not an advantage to a professor either in his relations with the students or in his relations with his more modestly situated colleagues. It is even doubtful whether such an income is a personal blessing to the possessor himself.

On the other hand, however, the university administration deserves commendation for not yielding to the pressure for the abolishment of the honorarium, and for continuing the old system of "double payment." I confess that I am so far from considering this system as an insupportable abuse that I rather look upon the combination of a fixed salary with a variable income depending upon the amount and quality of the work done, as an ideal system for the payment of state officials. Formerly, as is well known, this system prevailed widely: the clergyman, the teacher, and the civil official received, on the one hand, a fixed salary, and on the other, an income in the form of fees, tuition, voluntary offerings *in kind*, and similar "emoluments," dependent upon the extent of their own activities. The salary offered a modest but assured support, while the variable income, which could be increased by activity and grew with the amount of work done, on the one hand supplied the man of greater energy and greater needs with the possibility of satisfying them, and, on the other, offered a not altogether superfluous counterweight against the danger of laziness and routine, habits easily contracted when the income is a fixed sum entirely independent of the work accomplished.

- It is true, this system has disappeared, with the exception of some insignificant survivals. It became impossible in proportion as the state became bureaucratic. The danger that the service rendered or the decision pronounced might depend upon the amount of the fee, even the danger of the mere suspicion of such a thing, made it impossible. The salary system also seemed to be more commensurate with the dignity of office. Hence the honorarium is, to be sure, a survival of a

disappearing system. For the equality fanatic this is in itself a sufficient cause for its removal.

I will enumerate the reasons which influence me to demand its retention. The task does not seem to me to be superfluous, in spite of the fact that it has frequently been undertaken by celebrated men, of whom I mention A. Smith, Victor Cousin, Dubois-Reymond, J. von Stein, and Billroth. A clear understanding of these matters is not so common that a continued assault upon this not wholly unimportant part of our old German university system might not prove successful in the end. Let me add that the great majority of professors are in favor of the retention of the system and by no means only those who are blessed with opulent honorariums. With the majority, indeed, self-interest would generally argue against rather than for the system, for a uniform increase in the salaries of all the positions would mean for most of them an increase of income. And even those whose income in fees exceeds the average, would scarcely be personally interested in the preservation of the system, in view of the fact that vested rights would hardly be arbitrarily set aside. Nor are the financial interests of the students involved in the discussion: there seems at present to be less inclination than ever to remit the dues for instruction. It would, therefore, solely be a question as to whether what now goes to the professors in fees should go into the state treasury, either as payment for single lecture courses, as in Austria, or in the form of quarterly dues, as in France, where the law student pays 1,130 francs in matriculation and examination fees during his three years' course.

The reasons which, in my judgment, demand the retention of our traditional system, are the following:

1. To carry out the salary system absolutely would result in making more prominent than ever the official character of the professor in his relation both to the state and the student. The payment of the honorarium by the student to the teacher selected by him contributes in preserving that free and personal relation between them upon which it was originally solely based. It is certainly worthy of note that among the French professors the objection was expressed against the introduction of the German system that it would lower the dignity of the office.

On the other hand, the dependence of the university teacher upon the administration would be increased. At present he is not dependent upon its good-will for at least a portion of his income, and on that very account more independent in accepting or declining a change of position.

2. The accentuation of the professor's official character would, in connection with the increase of salary, lead to a more precise definition of his official duties, as for example, by fixing a minimum of lecture hours. And with the determination and increase of his official duties there would come a corresponding necessity for their supervision. The checking of the natural inclination to reduce the amount of official work as much as possible, which is now brought about by the diminution of the professor's income in fees in case he neglects his lectures or offers fewer courses, would, without such a diminution of income, have to be accomplished by supervision. We have no reason to expect that the accentuation of the official character of the professor's position would increase his zeal in the performance of his duties. The usual laziness of officialdom rather argues for the contrary. I would also like to remind the reader that, with the introduction of the salary system and the obligatory public lectures during the sixteenth century, the fixing of penalties also regularly occurs in the statutes, such as reduction of salary for every hour lost without a sufficient excuse, although, as may easily be seen from inspection-reports and also from lecture notes that have come down to us, this did not by any means prevent the frequent omission of lectures.

3. And with this weakening of external freedom there would also come about a tendency to diminish the internal freedom; the supervising authorities, beginning with the control of the number of hours devoted to duty, would endeavor to extend their control over the content and form of the instruction also. With the system which makes the professors nothing but state officials there would come prescribed courses and examinations, as in the French faculties. The development of our *gymnasien* reveals the fact that the establishment of the system of state supervision during the nineteenth century brought with it the regulation of the content and form of all instruction, giving directions even concerning the spirit and sentiment, which it

ought to awaken. This was not done intentionally or even with the consent of any one in particular. The bureaucratic system's tendency to expand works automatically. It would also assert itself in the universities. The controlling political parties, either in parliament or at court, would assert their influence in the same direction. Their demand is "correctness of opinion." For are not the professors paid by the "people" and appointed by the king? Then they ought to teach that which is agreeable to the people and pleasing to the king. To quote the bitter words of P. de Lagarde, it is in harmony with the party idea that employees, like maggots, should assume the color of the fruit on which they feed.

4. The old, specifically German system of private docents would also disappear. Side by side with salaried officials who lecture gratuitously there would be no room for independent teachers who teach the same branches for a fee. In the place of the private docents we would have assistants, substitutes, and other teachers commissioned to give courses. And then there would be a tendency among the professors to turn over the instruction to these in the form of paid courses; the desire to retain the dignities and perquisites of office, but to shift the duties upon "vicars" has always appeared under similar circumstances. And this inclination, again, would have to be guarded against by supervision.

5. Nor would the student's freedom remain undisturbed. Instruction imparted by supervised state officials presupposes or would result in supervision of the students also. Attendance upon the lectures is a matter of choice, because it is looked upon as a private affair, and the honorarium, at least in theory, is supposed to be a sufficient external incentive to the student to take the courses for which he has paid. And the tendency is, doubtless, in this direction. A person does not like to be deprived of that for which he has paid, even though he has not a very lively sense of its value at the time. A general fee would certainly not have this effect in like measure. Of course, it is possible that such a fee, offering free admission to all the lectures, would have the effect of inducing particular individuals to visit as many "interesting" courses as possible until an all too copious gratification would end in aversion and disgust.

And all this would, in turn, lead to an effort to check the evil. The attempt would be made to develop in the student stability and definiteness of purpose by means of fixed courses of study, and this would meet with the approval of professors transformed into teaching officials.

6. The relation of the professor to his hearers would suffer a material change. Objectively this relation now rests upon the fact that the student selects his own teacher and offers him a return for his instruction. This is plainly the case with the private docents. But it is true, also, of the salaried professor, and is so interpreted by him, for he, likewise, has to do with students who, by choice and payment, place him under personal obligation; he does not instruct them merely as an official duty. This feeling of personal obligation acts otherwise than the mere sense of official duty. It is especially well known to the better class of professors: they are keenly mortified when students, who have paid for their lectures, remain away from them and thus seem to reject the return as of inferior value. With the abolishment of the honorarium this feeling to do one's best to hold the students, probably the strongest of the external incentives, would without doubt lose some of its keenness; officials do not usually regard it as a cause for sorrow when there is little public demand for their services. These are intangible things; but a disregard of them is avenged in moral relations even more certainly than in political. Therefore, whoever does not wish all these things to happen, whoever is unwilling to make the professorship a mere office by divesting it of what it still retains of an independent calling, whoever is not ready to rob the relation now existing between teacher and student of the character of free choice and mutual return which it has succeeded in preserving, and to transform it into a purely official relation, will not be in favor of absolutely abolishing the fee system.

The results just described would not at once become apparent; the old traditions would continue to exert an influence for some time, but these results would be inevitable. Hence: *nōtūnus legem terrae mutari.*

I add, in conclusion, that the Prussian university administration is fully justified, on the other hand, in its determination to check the unreasonable increase of the honorarium by

fixing a scale, as well as in retaining a part of the large honorariums in order to equalize incomes. It is no less the right and duty of the administration to see to it, in making up the examination commissions, that the students secure the greatest possible freedom in the selection of their professors; an absolute guarantee against the abuse of the position cannot, in the nature of the case, be given. I am, moreover, of the opinion, that very extravagant notions prevail, often even among students, with respect to this whole subject. On the whole it is generally true that whoever decides to be independent and has the courage to be so, will be independent. J. E. Erdmann's words also apply here: "A professor who passes a man just because he has been his student, and a student who attends a professor's lectures only in order to pass, have no cause to reproach each other. They are *par nobile fratrum*. If in earlier times it really happened that a person, in order to secure a pastorate, married a count's mistress, he certainly had no right, in my opinion, to chide the count's baseness." (*Akad. Leben und Stud.*, page 197.)

To remove abuses and excrescences is to conserve that which is healthy. This is true in this instance. To cleanse the system of its odious effects tends to its perpetuation. In this spirit the system of delaying payment (*Stundung*) ought also to be handled. Recent enactments have sought to mitigate the difficulties that grow out of it. It seems to me that the proper thing to do would be to abolish the system entirely. It is intended as a help to the indigent student, but its real effect is to burden the first and hard years of his struggle for independence. The collection of the debt, which often grows to quite unnecessary proportions, because of youthful indiscretion, and which not infrequently requires the assistance of the courts and the police, is the cause of much trouble and bitterness. It is a fact, often observed, that those who enjoy the remission of the honorarium, are less careful in their choice of lectures and less faithful in their attendance upon them, than those who pay. In my judgment the system of remitting either half or the whole of the honorarium, according to circumstances, as it prevails in Bavaria, is to be preferred. The abuse or excessive use of the privilege could be prevented, on the one hand, by an examina-

tion by the dean, and on the other, if needful, by a restriction of the number of courses. By this means the remission of the honorarium would assume the form of an academic benefice based on the recipient's scholastic achievements.

6. *Titles and Decorations.* I add a few observations at this point concerning those external honors and distinctions with which the universities are at present so richly provided. Originally confined to political and military circles, the decorations, titles, and patents of nobility began to invade the academic world in the eighteenth century and have multiplied to such an alarming extent during the nineteenth that they are almost in danger of losing their distinction.

I confess my belief in the view that it would not have been a loss to the universities if these distinctions had been confined to their original sphere. In the diplomatic, political, and military world they have their meaning; they serve, if not to reward, at least to recognize distinguished service to the state or government in a suitable manner. In the learned world, and perhaps this is true, also, of the church and the bench, opportunities for meritorious service are lacking that can be suitably recognized in this way. Merit with regard to the state, political or military merit, is not acquired in this field. The service rendered consists in preserving and increasing intellectual goods, and, although this has great value for the welfare and honor of a nation, it is not a direct service to the state any more than distinguished achievement in art and poetry.

Or is it, perhaps, the purpose of these distinctions to encourage professors to achieve political merit also? In that case the question would arise whether such a thing was compatible with their real vocation. In my judgment this question cannot be answered in the affirmative. If the problem is to acquire the freest and most impartial knowledge of the truth and to lead others in the same direction, then, it seems to me, there can be no doubt that participation in politics and deferent regard for the views which the political powers happen to consider allowable or necessary, will not enhance, but rather diminish and divert the professor's capacity to realize this end. Even though the services of scholars who possess the public esteem,

may occasionally be desired by the political powers, it will be better for the academic world and the ideal peculiar to it if they be not rendered.

But, it will be said, these distinctions are not intended as a recognition of political services, but rather as a recognition of scientific achievements. As such they tend to bring the value of these things to the attention of the laymen who otherwise would not hear of them at all. They give science a recognized rank by placing its representatives among the dignitaries of the state.

Let us grant the good intention, although one may perhaps say of the state, what is said of the devil, that it does nothing for nothing. Let us assume that these distinctions are given entirely according to the degree of merit acquired by academic service and for the purpose of bringing the great value of this service to the whole world's notice; is that purpose achieved? I fear the contrary is the case. If intellectual achievement is measured by the same standard with which military and political services are measured, it will necessarily be looked upon as of less value than these, for the honors falling to the scholar will, as compared with those conferred upon the holders of military and political offices, always be meagre, and justly so, for political and military services are always of much more immediate importance to the state. Hence it would be better for the reputation of the learned world if it refused to engage in a competition in which it is bound to get the worst of the bargain. What are the titles and orders worth that can be obtained in an intellectual career, compared with those which tempt the political and military world? How can the scholars with their half dozen "Excellencies" compete with the hundreds and thousands of political and military Excellencies? The importance of the calling, measured in this way, will seem far inferior to that of the other classes, just as in the case of the gymnasial teachers, in spite of all the attempts that have recently been made to raise their profession to a higher rank. Or has its reputation risen since the bestowal of the order of "councilor of the fourth class"? It seems to me the calling stood higher when it made no pretensions to titles, but held the esteem of the world of scholars. The distance separating

it from other classes is simply brought to light by its entrance among the titled orders.

And the remark of old Michaelis of Göttingen is still to the point.¹ "The individual professor doubtless profits from his titles; but does not the university, on the whole, sustain a loss? As a matter of fact, it seems to lend more dignity to an institution when the position itself determines the social rank of a professor than when his standing depends on titles. The military class, the source and standard of all rank, does not accept titles from other classes." He also adds these misgivings: "The distinctions created between professors by the bestowal of titles not infrequently constitute a cause for discontent."

Nor does his colleague, the witty Lichtenberg, seem to have a high opinion of the custom, or to expect an improvement in the dignity of human personality by such means; he ventures the almost slanderous remark: "The man *sans la lettre* was better before the title had been tacked on to him."

However, neither Lichtenberg nor Michaelis escaped the fate of becoming a *Hofrat*. If I am not mistaken, the whole system began at Göttingen; the *Hofrat* is indigenous to the modern court-university. At the Prussian universities, apart from a few "*Geheimle Räte*" in the law faculty at Halle (where, however, the thing had some meaning: the state really needed them, if not as political advisers, at least to draw up professional opinions) and some exceptions in the philosophical faculty, which prove the rule, the "*Geheimrat*" did not become common until the last generation, his appearance being connected with the development of the laboratory system. The title has now become so common that the philosophical faculties are frequently veritable boards of "privy counselors." The professors at Strassburg have refused to countenance this metamorphosis, without injury, I am sure, to their dignity and independence.

Should these remarks give offense to any one, I suggest that he derive his satisfaction from the popular parable of the fox and the sour grapes. As for the rest, I have no fear that my remarks will do any harm: governments will not be wanting

¹ *Räsonnement von den protestantischen Universitäten*, ii., 408.

in future which are ready to offer such rewards for services performed nor will there be a dearth of hands stretched out to receive them.

7. *The Legal Status of the Private Docents.*¹ The private docent is a scholar to whom the faculty has extended the privilege of teaching, but who is not a member of the official teaching body, and is under no official obligation to teach. In a certain sense he is a living survival of the original form of the university, in which the faculties, as autonomous teaching-corporations, perpetuated themselves. The bestowal of the *venia legendi* signifies admission into the teaching body of scholars, but not into the state's official corps of instructors. The peculiar dual character of the German university as a state institution and a corporation here becomes most apparent. "Habilitation" does not confer upon the private docent any kind of office or official character; if he does not wish to lecture, his right to do so is merely held in abeyance but is not extinguished, and if, for two successive semesters he does not respond to the invitation to announce his courses, his name is omitted from the announcement of lecturers.²

Otherwise he is on an equality with the professors as a teacher. He has the use of the university buildings and laboratories; his lectures and exercises are announced in the catalogue,

¹ Bornhak, *Rechtsverhältnisse*, pp. 61 ff. Daude, *Die Rechtsverhältnisse der Privatdocenten*, Berlin, 1896, gives a comparison of the laws in force at all the universities of German tongue. I mention also the opinion of Hinschius in the *Zentralblatt für die preussische Unterrichtsverwaltung*, November, 1897, with which compare J. Jastrow, *Die Stellung der Privatdocenten*, 1897, and an article of mine on *Die deutschen Universitäten und die Privatdocenten* in the *Preuss. Jahrbücher*, November, 1897.

² So with variations at the Prussian universities. Other conditions obtain in Catholic countries, where the private docent was not originally at home. In Bavaria permission to teach is given by the ruler, the private docent must take a kind of oath of office, is required to give at least one course of lectures and can be removed at will by the ruler. In Austria the faculty's action needs the approval of the Ministry of Education, which also reserves the right of examining for itself the scientific qualifications of the candidate, and repudiates the faculty's vote if it sees fit, a procedure which in theory amounts to the repudiation of the faculties themselves. Particulars in Daude.

and are, in case the student is formally enrolled in the course, accepted as regular work. The student is under no obligation whatever to attend the lectures of the salaried professors. The faculty, however, is not permitted to take account of the private docent's activity, in making provision for the courses. The official teaching corps is supposed to be complete without the private docents. This arrangement prevents the employment of cheap talent on the part of an economical administration.

At the Prussian universities the conditions for "habilitation" are printed or written scientific treatises and two lectures, one of which must be held before the faculty and is followed by a *colloquium*, and the other a public one before the students. The emphasis is laid on the treatises which are submitted by the candidate; his ability as a speaker is not taken into consideration at all. Scientific ability is thus declared to be the chief requisite for an academic career: a body of scholars examines the scholarship of the candidate. I shall have occasion to return to the significance of this system for the German universities. At this point I wish to add a few remarks concerning its historical development.

As shown above, the conferring of academic degrees originally carried with it the right to teach, *licentia docendi*, theoretically in all universities, *hic et ubique terrarum*. In reality, however, this right of free movement was scarcely recognized at any time; as a rule, besides the necessary monetary considerations for the nostrification of diplomas, at least one disputation was most likely held before the assembled faculty by way of introduction and as a test of efficiency. So far as I can see, it was a general requirement during the eighteenth century, even for one who wished to become a *magister legens* in the faculty which had given him his degree, to "habilitate" himself, that is to say, to demonstrate his "habilitation" or fitness by one or more disputations on printed treatises. The practice was connected, on the one hand, with the demand for a higher grade of university instruction, and, on the other, probably also with the lowering of the requirements for degrees, which resulted from the increased demand for them, especially in the faculties of law, medicine, and finally also of philosophy. The sarcastic maxim, by the way: *Sumimus pecuniam et mil-*

timus asinum in patriam, most likely dates back to the Middle Ages. To the requirement of the disputations, which was repeated upon promotion to a professorship, we owe, among other things, a number of Latin dissertations by young Kant. As the disputations became obsolete in the nineteenth century, the requirements for the dissertations were raised. The demand that a longer interval ensue between graduation and "habilitation" must be looked upon as favoring quiet intellectual concentration on the part of the habilitant himself. From this standpoint we can estimate the value of the assertion recently brought forward that the requirements for habilitation have been constantly raised by the professors, who have acquired absolute control during the nineteenth century, in order to shut out the competition of younger men.¹

I shall also touch upon the disciplinary regulations affecting private docents which, a few years ago, threw the political world into a state of turmoil. The law of June 17, 1898, has brought them under central control, whereas formerly they were differently defined by the statutes of the individual faculties. As a rule, a faculty had the oversight of and the right to discipline its private docents. The new law gives the minister of education equal authority with the faculty in imposing penalties (reprimand and warning). The withdrawal of the *venia legendi*, however, makes necessary a formal disciplinary process, the faculty acting as the trial court, and the ministry as a court of appeals.

The law, known as the *lex Arons*, was occasioned by the case of a private docent of physics at the University of Berlin, who became a convert to the social-democratic party and engaged in public agitation in its behalf. The faculty did not regard this as incompatible with the character of a private docent, though it did not hesitate to impose penalties for excesses in agitation. The ministry, however, was of the opinion that public avowal of social-democratic principles naturally carried with it the withdrawal of the *venia legendi*. In order to gain this end the above-named law was passed, upon the strength

¹ E. Horn. *Zur Geschichte der Privatdocenten*. In *Mitteilungen der Gesellschaft für deutsche Erziehungs- und Schulgeschichte*, edited by K. Kehrbach, vol. xi., 1901, pp. 26 ff. •

of which Dr. Arons was deprived of the *venia* by ministerial decree, after the faculty had again decided to the contrary as the court of the first instance. Whether the danger arising to the state or public order from Dr. Arons's championship of social-democratic ideas was urgent enough to necessitate such far-reaching political action, may be left undecided. Likewise, whether future events will justify the assertion that this law increases the legal security of the private docent against injustice on the part of the faculties. In the meanwhile we can add this assertion to the chapter on political hypocrisy, which, though it cannot be entirely dispensed with, as things go in this world, ought to be employed only as a last resort and with modesty, if for no other reason than to save it from wear and tear.

During the last century the standing and importance of the private docent as a member of the teaching corps have been lowered, in fact, though not in law. The old *magistri legentes* formed, in addition to the salaried professors, essentially an independent, unofficial part of the teaching force; there was nothing to prevent a capable man from acquiring a considerable sphere of influence and a living income, as was the case with Kant, who taught as a private docent until he was forty-six years of age, without becoming dissatisfied with his position. According to the degree in which the official character of the professorship was accentuated and the examination and seminar systems were developed, the teaching activity of the private docents lost in significance and extent. As a general thing the private docent of to-day, unlike the old *magister legens*, looks forward to a professorship; for the individual the position of private docent is a stepping stone to a salaried professorship, and for the universities it is a training school for professors. Of course, it still happens that older men "habilitate" themselves without having a professorship in view, and merely in order to give free scope to their desire to teach; and it happens, likewise, that scholars who for some reason or other do not reach the professorship for many years, exercise a not always insignificant influence as private docents. And it even happens that a professor who has been deprived of his official position again takes up the business of teaching as a private docent: a

refuge of freedom not without all value. But, in general, the position of private docent is a stepping-stone to the professorship.

But this fact has no legal basis, as every private docent is given to understand at his "habilitation." Unlike all other officially organized callings, it does not follow that every man who puts himself in line and measures up to the general requirements will be promoted in his turn, for the principle of priority is not enforced. To this is due the uncertainty and precariousness of an academic career. Promotion to a professorship depends, in the main, upon the call of a faculty or upon a recommendation for the position of *extraordinarius*. It may happen, therefore, that a thoroughly competent scholar, one who is also a thoroughly competent teacher, is passed over and neglected for a less competent person, either because he is unpopular with those on whom he depends for promotion, or merely because he does not possess the shrewdness or the talent to supply himself with the necessary recommendations and influence. And the result will be a long, hard struggle, with privations and an overplus of work, leading at last to the destruction of health and strength, to unhappiness and ruin.

Is it possible to secure the academic career against such failure, can we make the promotions as regular as in other offices? Something similar to the principle of priority has been suggested: after a regular and fixed period of teaching activity, especially as a public lecturer, there should be promotion, first, to the position of unsalaried *extraordinarius*, with the right of succession, in the next place, to that of a salaried *extraordinarius*. This is the view of the author of the treatise on the academic career referred to above (page 92). Such a system, however, would be open to the gravest objections. To make the initial promotion dependent upon applause, as it used to be said at Göttingen, and that, too, upon applause in public lectures, would not only be giving too much consideration to the judgment of the students, but might also occasionally tempt to all sorts of daring candidating.

Indeed, it may be said, the essential thing here is not the performance of professional duties which any man of mediocre capacity can undertake after a little schooling, but independent

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productive power, which can only—but of course not always and absolutely—be measured by the candidate's scientific achievements, whose value must be judged by colleagues in his own field of work. In such a profession, as in other independent professions, it is impossible to assure everyone promotion who follows the normal routine. In the very nature of the case the risk is greater here, and it cannot and ought not to be removed. It can, however, be lessened, and that is the business of the administration.

Competent men who have been successful as teachers, but who are unjustly kept back in the academic competition, might be provided with salaried positions as extraordinary professors or they might receive some temporary form of remuneration. Or they might receive some recompense for public lectures, as suggested by the author of the above-named treatise, although the general application of this plan would be open to serious objections. But the risk cannot be wholly removed: the system of acquiring a professorship by prescription, the application of the principle of seniority of service, would mean the destruction of the university as a scientific institution.

For this reason it is particularly essential that the individual should have a clear appreciation of the situation, that he should not conceal from himself the uncertainty of the career, and that he should not enter upon it without something to fall back upon. He should above all, by taking some examination, keep the way open for entering some other calling in case he does not succeed in the academic career. Theologians, jurists, and the medical men regularly do this. The practice is not so common, however, in the philosophical faculty, hence old and disappointed private docents are the most numerous here. The new regulations of 1890 concerning practical training make it more difficult than ever to go over into the secondary schools. But, by way of compensation, positions in other callings have increased, as, for example, in the administration of libraries and archives. The newly created posts for "scientific officials" at the Berlin Academy are also suited to furnish competent scholars who have not been successful as teachers with appropriate positions. It may also be assumed that the demand for more elementary instruction for beginners

will increase; the differences in preparatory training will frequently emphasize the need of private instruction in one field or another, either in the languages or in mathematics.

The essential thing, however, will always be not to deceive oneself concerning one's inherent fitness for the academic career. That persons not infrequently deceive themselves in this respect, is doubtless true; our university system itself is in a way responsible for it. The student hears constant criticisms and is himself urged to criticise: why should not the thought suggest itself to him that he may be called upon to enrich the field of knowledge with better theories? In case he finds admiring comrades, and a teacher who is not niggardly in recognizing his "pupil," it will not be surprising if he begins to feel that he ought not to allow his genius to wither away in the dull monotony of official routine. And when he has "habilitated" himself, and feels proud of being a promising private docent, and has received the homage which is always forthcoming, and then does not obtain the expected recognition and promotion, he naturally finds it hard to discover the cause in his own inefficiency. Then follow charges against the system and against the men who are responsible for the fact that such gifts as his own are allowed to rust out unused. The only safeguard against such disappointments is earnest self-examination, an examination into all the conditions, even into one's subjective attitude toward science itself. Before any one decides to enter the academic career, he should first thoroughly convince himself that intellectual work is an inner need and a need so vital that its satisfaction would compensate him for any lack in salary and rank. From this point of view the private docentship would afford the young scholar an opportunity to live the life of a scholar, without official duties, and also, of course, without any of the rights and privileges of office, to devote himself wholly to science and to impart his knowledge to younger men as inclination and opportunity dictate. All of which implies, further, that whatever tends to make an official of the private docent, either with regard to position and salary or discipline, is contrary to the purpose of the system. The less he depends on the state, the more nearly will the ideal be realized.

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From this point of view certain changes ought also to be considered which are beginning to take place in the position of the private docent. They are due to the establishment of stipends for private docents and to the union of the office with the assistantship. In 1875 a fund was created both in Austria and Prussia (40,000 florins in Austria and 54,000 marks in Prussia), for the support of indigent young scholars who have either already entered the academic career or have decided to do so, and whose previous work gives promise of success. The purpose is not to introduce a kind of remuneration for the private docents; by no manner of means, it is held; the object is not to assist old, unsuccessful, and needy private docents, but rather to enable young and promising doctors or docents to enter upon and continue in a career which they would otherwise have to renounce. The enjoyment of the stipend is, therefore, limited to four years. The purpose aimed at in this arrangement is to make entrance upon the academic career somewhat more independent of wealth than has been the case. But one of the results not aimed at will be to increase the private docent's dependence upon the professors: the recommendation for the stipend will regularly proceed from the professor in the candidate's department, and it is natural and inevitable, that the professor should, first of all, suggest young men whom he knows and esteems as his pupils; and it is equally natural and inevitable that docents should be retained who have been encouraged by stipends to enter the academic career, except in extreme instances. This undoubtedly will make it more difficult for those outside of the universities to enter the academic career.

And the system of assistantships in the departments of medicine and the natural sciences will have the same results. Only persons who, as professors' assistants, have access to the facilities of a laboratory can hope to obtain the position of docents.

CHAPTER II

THE RELATION OF THE UNIVERSITIES TO SOCIETY

1. *The Origin of the Universities in Social Necessities.* All public institutions of learning are called into existence by social needs, and first of all by technical-practical necessities. Theoretical interests may lead to the founding of private associations, such as the Greek philosophers' schools; public schools owe their origin to the social need for professional training. Thus during the Middle Ages the first schools were called into being by the need of professional training for ecclesiastics, the first learned profession, and a calling whose importance seemed to demand such training. Essentially the same necessity called into being the universities of the Parisian type with their artistic and theological faculties. The two other types of professional schools, the law school and the medical school, which were first developed in Italy, then united with the former. The universities therefore originated as a union of "technical" schools for ecclesiastics, jurists, and physicians, to which divisions the faculty of arts was related as a general preparatory school until, during the nineteenth century, it also assumed something of the character of a professional institution for the training of teachers for the secondary schools.

To these "learned" vocations of the old order the century just closed, under the influence of the social-industrial evolution, has added a number of new ones, which call for university training. First of all, there are the "technical" callings in the narrower sense, such as engineering, architecture, chemistry (as the technical preparation for industrial chemistry), mining, and forestry. But even the pursuits of the agriculturist, merchant, and soldier in our day depend upon such varied scientific principles that technical training seems to be indispensable.

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The numerous new forms of the university which now exist side by side with the old universities have all sprung from these new social needs. We thus have schools of technology, agriculture, and forestry, veterinary schools, academies of art, military academies, and schools of commerce. They can merely be mentioned here, but they must at least be mentioned in order to show how the conception of "academic education" has grown in our days. I wish merely to add a word concerning the technical universities, the best among these new higher institutions, which are growing more like the universities both in organization and curriculum.

At present there are nine schools of technology in the German Empire, all of them founded during the nineteenth century, most of them in the capitals of the different states: Berlin-Charlottenburg, Hanover, Aachen, Brunswick, Dresden, Darmstadt, Karlsruhe, Stuttgart, and Munich, to which, apparently, two new ones will shortly have to be added in eastern Prussia, Danzig and Breslau. The number of their students is already almost as large as that of the universities fifty years ago, more than 12,000. Like the university, the technical university (*Hochschule*) represents a union of several technical schools, which are here called "departments." Thus the Charlottenburg school has six, one each for architecture, civil engineering, mechanical engineering, marine engineering, chemistry, and metallurgy, to which is added a department for the general sciences, especially mathematics and the natural sciences. They are constantly approximating the universities both in organization and instruction. Recently they have also acquired the right of conferring an academic degree (that of Doctor of Engineering).

It would have been possible to add these "departments" of the new schools of technology to the "faculties" of the old universities, a thing which has been done in the case of agriculture. Their general form is the same; the three higher faculties at least are in principle merely "technical institutions," that is to say, training schools for the practical professions, just as much so as the "departments" for engineers and chemists. The theoretical sciences upon which each one is based are all to be found in the "philosophical" faculty: theology and juris-

prudence depend on history and philosophy, medicine on the natural sciences; the same thing being true of the "technical" branches: engineering rests on mathematics and physics, practical chemistry on chemistry, etc. Medicine could also be added as a "department" in the technological school; in which case it would naturally carry the biological sciences with it. The causes which have led to the existing separation of the universities and schools of technology are not to be sought in the classification of the sciences nor in the peculiar nature of the professions, but in external, historical conditions. Above all, the schools of technology gradually evolved out of separate lower technical schools as occasion demanded, and have grown up independently of the general educational administration. There has been, besides, a tendency on the part of many academic circles to look down upon technical knowledge and ability as something inferior, a tendency, by the way, which is disappearing. It was due to the ascendancy of philological-historical culture and the aversion of the new humanism to everything "realistic" and "utilitarian."

It is to be regretted that the new professions requiring higher training were not articulated with the old "faculties." Many rivalries, as for example between technologists and jurists, which occasionally vent themselves in violent recriminations, would probably have been more readily avoided. And knowledge and practice doubtless belong together; connection with a university, the privilege of using its scientific laboratories, closer contact with the theoretical research practiced there, would certainly bring many advantages to the new "technical" branches. And, on the other hand, closer contact with practice would probably have a stimulating effect upon research, similar in its character to the mutually beneficial relation existing between medicine and the biological sciences in the philosophical faculty. However, such an arrangement, once in vogue, cannot easily be reversed. And even if it could be, it would make the academic body far too large and unwieldy. And there is, really nothing to prevent a closer approximation of the two forms: the technological schools are constantly appropriating a larger share of scientific work, as well as realizing, more and more, the ideals of general intellectual culture: while the universities, on

the other hand, at least some of them, are striving to bring the technological applications of science within the range of their activities, especially with a view to the training of teachers for the realistic and technological schools. Besides, whenever a university and a technological school exist in the same place the students freely enjoy the privileges of both institutions. A frequent interchange of instructors also takes place.¹

2. *Co-education.* The old universities are also exhibiting a tendency to enlarge their activities in other directions, as in the admission of women and in offering university extension work. I merely touch upon the subject in order to indicate the social changes which bring these things about.

The social development of the nineteenth century has caused a double change in woman's position. The new industrial conditions and city life have robbed the old economic functions embraced under the term of "house-keeping" of much of their former significance, and woman has turned her back upon the narrow confines of the home to enter the general labor market. On the other hand the two sexes have been constantly approximating each other in the domain of higher education. During the eighteenth century there was still a deep chasm between the education of girls, which never went beyond that of the elementary schools (*Volksschule*, or common school), and the education offered by the gymnasia. The natural consequence of this dual movement is that girls having the desire and strength for something better can no longer be excluded from higher education nor deprived of the privilege of following the professions which it opens to them. Justice also demands this. The right to work, to create for oneself a sphere of action commensurate with one's ability and to achieve a higher station in life, is the most important of human rights. To shut out persons who wish to work and achieve something simply be-

¹ For the history of the technological universities, E. Zöller, *Die Universitäten und die technischen Hochschulen*, 1886. Damm, *Die technischen Hochschulen in Preussen*, 1899. A. Riedler, *Unsere Hochschulen und die Anforderungen des 20. Jahrhunderts*, Berlin, 1898. F. Klein and E. Riecke, *Ueber angewandte Mathematik und Physik in ihrer Bedeutung für den Unterricht an höheren Schulen* (lectures delivered at Göttingen during the vacation course for head-masters of mathematics and physics, Göttingen, 1900).

cause they are women, and to refer them to the always uncertain contingency of marriage—a contingency beyond their control—appears to be an unbearable restriction of human freedom and dignity. And so woman has succeeded in entering the professions requiring scientific training, first of all in the English-speaking countries, especially in the United States, a country less trammelled than ours by traditions and customs. In Germany, also, the opposition has weakened, even though it has not been entirely removed. The *Oberlehrerin*, in particular, has invaded the philosophical department.

As much as I recognize the necessity for this concession to new conditions, I cannot deny that I do not look for such great intellectual progress to result from it as some others seem to expect. The history of the sciences and arts hardly leaves any room for doubt that real creative activity has, in general, been bestowed by nature in a larger measure upon the male than upon the female. The fact that full maturity, including that of the intellect, is attained later in life by the male sex, and that the period of development is consequently longer, also seems to favor this view.¹ It is even less doubtful that a man's energy is, on the whole, more robust, persistent, and reliable; a woman's average strength, especially the power of resistance of her nervous system, is more easily exhausted, and more exposed to all kinds of disturbances and limitations. Hence the female sex will always remain less capable of meeting the demands of public professions which require regular and uniform service. Finally, the fact must also be taken into consideration that a woman ages more rapidly than a man, and that, therefore, a long period of training would not be economical, not to mention the possibility that marriage might necessitate the abandonment of professional activity on her part altogether.

It may, therefore, be assumed that the intellectual training of young women for the so-called learned professions will always be somewhat exceptional, at least in those countries in which the

¹ I refer to two recently published investigations which contain many facts worthy of notice in this connection: K. Joël, *Philosophenwege*, with the treatise: *Die Frauen in der Philosophie*, and P. J. Möbius: *Ueber den physiologischen Schwachsinn des Weibes*.

supply of men is equal to the social demand, or even exceeds it, which is not the case in the United States. Hence, also, the general form of the higher education of women will not, like the education given by the gymnasium, be arranged with a view to the university. The most sensible arrangement will be to supplement the knowledge acquired after completing the course at a higher girls' school with special courses, in case the girl desires to prepare for the university.

3. *Further Extension of University Activities.* In still another direction has the sphere of the university been extended in Germany; following the example of the English and American universities it has made a small though not unsuccessful beginning in endeavoring to reach a wider constituency among the people. The great universities in the large cities, especially (Vienna, Berlin, Leipzig, Munich), have endeavored to meet the demand for education among the masses by offering brief winter-courses in the evenings. This movement, too, seems to be most intimately connected with the social development, above all, with the tremendous expansion and intensification of universal education. At the beginning of the nineteenth century the people were still divided into two distinct halves: into scholars equipped with a classical education and laymen possessing a scanty elementary education, the former called to be the rulers and the latter to be the ruled. Since then, with the progress of industry and commerce and the corresponding growth of cities and wealth, the improvement of the elementary and intermediate schools, the reorganization of political life, the advances in self-government and the coöperative system, there has come into existence a large and educated middle class extending down into the higher strata of the new laboring population in the large industrial centers. It is precisely the latter class—who have, of their own initiative, by the way inaugurated an intellectual movement of considerable force and depth—whom the universities are now endeavoring to assist, in part from the conviction that a continuation of the isolation and estrangement, which the pride of learning has hitherto encouraged, is a menace to our entire civilization.¹

¹ Concerning the English-American university extension movement, see G. Fr. James, *Handbook of University Extension*, Philadel-

I must add, however, that the need which has led to the creation of public high-schools (*Volkshochschule*) in the neighboring countries to the north of us will not be satisfied by such methods. These institutions, spreading from Denmark over Sweden and Norway, are private schools which construct a more independent higher form of instruction upon the basis of the elementary school. The instruction, organized into half-yearly winter-courses, aims, especially, also to meet the demands of the rural population for a more general education. The north-western regions of our own country, which exhibit a similar social structure, offer a favorable field for such institutions, and they are no longer entirely lacking. Should they succeed in inducing the peasant class to take a more active interest in the intellectual life of the people and thus increase the economic power of resistance of this part of the population, so important for the life of the social organism, by raising its intelligence and independence, they will be highly conducive to the general welfare. For it must not be forgotten that the instruction of the common schools (*Volksschule*), closing with the pupil's fourteenth year, ends too soon, that the period most susceptible to and most in need of education, the years from fifteen to twenty, the years between the public school and the military service, are now not only allowed to lie perfectly fallow, but to lose and waste what has been so laboriously acquired during the preceding period at school. In eastern Germany and in the Catholic south of Germany the conditions are not quite so favorable to such public high schools; the difficulties and objections are greater, but not insuperable; the predominantly agricultural and Protestant regions must take the initiative.

I conclude with a general remark. The fact that the German universities are making all these efforts to give a higher education to ever-widening circles is an evidence of the remarkable change of sentiment which has taken place in a single generation. For a long time university circles looked upon a strict isolation of science from the so-called popular culture as a requirement of professional honor. Whenever any one con-

phia, 1897. A brief summary, embracing also the northern movement, is given by E. Schultze, *Volkshochschulen und Universitätsausdehnung*, Leipzig, 1897.

descended to the level of the general public, science looked upon such conduct as lacking in dignity. This feeling was connected with the great and universal reaction against the *Aufklärung*. The speculative philosophy was the first to insist upon a strictly esoteric character. Obscurity and incomprehensibility were proudly regarded as an advantage over the "popular philosophers" and their endeavors to achieve "clearness and utility." No less did the new classical learning refuse to have any intercourse with the "masses"; *odi profanum vulgus*; whoever does not know Latin and Greek does not count. It would not be dignified to write for such. Many, indeed, would have preferred the revival of Latin as the cryptic language of science. The contempt for translations was characteristic. Then came the period of "exactness," during the second third of the century; the exact sciences, naturally exclusive, also resolutely isolated themselves from wider circles. A greater stigma could not have been placed upon a university man than to accuse him of "publicistic" tendencies. During the last generation an unmistakable change of sentiment has taken place; sympathy for universal culture is growing, scientific lectures for larger constituencies, primarily in the domain of the natural sciences, but also in the field of the mental sciences, have also become somewhat common even among us; periodicals of a general character, like the English and French monthlies, have also undertaken to popularize knowledge; and university professors are everywhere leading in this work. The university extension courses constitute the last step in this direction.

It is my conviction that this revival of the ideals of the *Aufklärung* has the fullest subjective justification, no matter how skeptically it has been and is still looked upon by certain elements in Germany. Of course, scientific research itself will always be the concern of the few, and the severer the demands made upon them and which they make upon themselves, the more fruitful their work will be. But that does not mean science for science alone! Science is, certainly, not the concern of the scholars alone, but of the people also; the uplifting of the whole people is the final goal of all the progress of knowledge and the grandest duty of the educated classes. It is an unhealthy and dangerous condition for science and the people

to become estranged from and indifferent to each other. It was in consequence of such isolation, which the pride of scholarship brought about during the first half of the nineteenth century, that the masses took up with writers of inferior worth. A sample of what is inflicted upon the public as philosophy, whenever philosophy retires into the solitude and darkness of Hegelian speculation, is the literature of materialism. Nor is isolation favorable to scholarship itself. Scholars who lose touch with the intellectual life of the people as a whole will also, in the end, lose their sense for that which has essential value. And after all, science exists in order to be of service to mankind.

Such was Kant's opinion, a man who certainly knew how to guard the rights of science against the demands of an unreasonable popularity. But, ultimately, all the theoretical achievements of science are at the service of philosophy, and philosophy, as the doctrine of practical wisdom, is at the service of mankind. As for the fear that superficial education and arrogance would be encouraged by such efforts, it may be said that it is probably limited to persons who are not awake to present conditions, or cherish the impossible hope of turning back the hand of time a hundred years. By superficial education I mean a smattering of everything and the ability to talk about everything of which one really knows nothing. And in these times when everybody reads in the paper, day after day, articles and final judgments on all possible themes, there is such a surplus of this semi-education that the public high school courses and similar schemes will scarcely increase it. It may, however, be said, that the lectures would certainly be hopeless from which the audiences carried away with them the conviction that they knew everything and understood the matter thoroughly, instead of a consciousness of their deficiencies and a longing for further instruction. It is, rather, to be hoped that they will contribute somewhat to the spread of the scientific spirit, that they will help to develop a critical sense in their hearers, and that they will counteract the narrowness of party dogmatism of every kind.

4. *The Social Position of the Academically Educated.* In Germany those who have a university education form a kind of intellectual aristocracy. It is composed of the clergy and

teachers, the judges and officials, the physicians and technologists, and, in short, all those who have gone through a university and have secured the *entrée* to one of the learned or administrative vocations. As a whole they constitute a kind of official nobility, and as a matter of fact, they all really take part in the government and administration. They are found actively engaged in the bureaux and courts, in the ecclesiastical consistories and school faculties, and in the hygienic and technological administration of every grade.

On the whole, those who follow these callings constitute a homogeneous social stratum; they recognize each other, because of their academic training, as social equals, although this does not, of course, exclude differences of rank within a profession nor gradations of respectability among the professions. All kinds of rivalries, such, for instance, as exist between technologists and jurists, have their origin in this condition. But just as the academic residents of the universities recognize each other as equals, as fellow-students, even though this, that and the other group may cherish its peculiar pride, so also the members of all the academic professions recognize each other in theory as on an equal footing, although this recognition may consist in nothing but a willingness on their part to regard each other as perfectly capable of giving "satisfaction" upon the field of honor.

On the other hand, a person in Germany who has no academic education, is without something for which wealth and noble birth cannot offer a complete recompense. The merchant, the banker, the wealthy manufacturer or even the large land owner will occasionally become sensible of the lack of such an education, no matter how superior he may feel in other respects. The consequence is that the acquisition of an academic education has become a kind of social necessity with us; a person must at least have been graduated from the gymnasium, which would give him a potential claim to academic citizenship. Only a commission in the army can, in a measure, relieve a man from this necessity. This already attracted the attention of the Frenchman, Charles Villers, at the beginning of the nineteenth century: "A German," he writes, "who has not put the finishing touches on his education, who has not taken lectures for a few semesters at some university, is not regarded as an

educated man (*homme instruit*) by society. Even the phrase 'to study' has been reserved for this final educational stage."

This state of things, which now seems so natural and self-evident to us, was not always in vogue. An academic education has not always been a prerequisite for, and a guarantee of membership in "society" or in the gentleman's class. It has only really become so since the close of the eighteenth century. The historical development was as follows:

During the Middle Ages the nobility were not generally expected to have a higher education; princes and nobles, with the exception of younger sons intended for the church, did not attend the universities. During the earlier years of this period the nobility did not even acquire the elementary arts of reading and writing, the *artes clericales*, as they were significantly called. Many a German emperor merely made his mark instead of writing his name. As late as the fifteenth century the humanistic orators and poets constantly reproached the German nobility for their lack of culture, as compared with the Italians, and their lack of interest in intellectual things. On the other hand, German princes who had an education and who prized it, such as Duke Albrecht IV., of Bavaria, were derided as "clerks" by their nobles.

Since the advent of the new era the importance of intellectual, and even scholastic, culture, has constantly increased. The Renaissance and the Reformation were both effective in this direction. The former raised the standard of secular education, and the latter that of theological. The adoption of the Roman law did the rest in that it made educated jurists indispensable in the governmental councils. All these forces were in operation during the seventeenth and eighteenth centuries, and the modern state came into being, with its educated secular and spiritual officials. The nobility was thus compelled to secure an academic education in order to retain its position. The new and modern universities, Halle, Göttingen and Erlangen, first attracted the nobility in great numbers; they point with pride to the counts and barons whom they have matriculated.

It is true, another road remained open besides the one through

the university; the way through the army. The sons of noble families, after acquiring the necessary information from a tutor or at an academy for young noblemen (*Ritterakademie*), which really, to some extent, took the place of the university, entered the army as officers, from which the capable ones passed into the diplomatic service as well as into the higher administrative offices. And indeed this was looked upon as the more respectable course, and was followed especially by the sons of the ruling houses. Princes went through the army, not through the university. Call to mind the educational history of the Hohenzollerns; the kings of the eighteenth century were not educated at the gymnasium or at the university. Emperor Frederick was the first to study at a university, and Emperor William II. the first one to finish, besides, the course at a gymnasium. An academic education was not, as yet, the necessary prerequisite of a gentleman during the eighteenth century, nor did it give its possessor the *entrée* into society. The jurist, at best, might rank as a "gentleman," but the clergyman, the physician, and the school teacher could make no such pretensions. Not until the nineteenth century did an academic education so rise in value that the old nobility could no longer do without it and that its possession admitted one among the "gentlemen." All this is, moreover, due to the general changes that have taken place in society.

The old land-owning hereditary nobility has lost, or at least no longer holds in the same degree the dominant position which it held unchallenged during the eighteenth century. The middle class, on the other hand, is increasing in influence; since the middle of the eighteenth century it has won the leadership in the intellectual world, in literature and the sciences, and since the middle of the nineteenth century it has also acquired an ever increasing preponderance in the industrial world, which, of course, explains the prominence of this class in politics. It is in the universities and the academically educated circles that the people of the middle classes are really represented in Germany. The introduction of the final or leaving examination (*Abiturientenprüfung*) and the state examinations has made it possible on the one hand for the able among the middle classes to rise in the civil service, and has, on the other, compelled the old

nobility to take their places in the line and to earn by equal merit the offices which formerly belonged to them by right of birth.

The reaction of this evolution upon the state and society is described for us by Schmoller, who says, in his *Volkswirtschaftslehre* (page 353):

"The development of our new system of study and examination has transformed most of the liberal callings into fixed careers; it attracts, mostly from the middle classes, a largely homogeneous element to the different groups; it has created a distinct professional honor, fixed customs and practices with regard to professional duties, and has set definite limitations to money-making. These liberal callings have thereby acquired an entirely different character. The families that turn their sons into the liberal callings have become a more or less distinct social class, a class characterized by personal qualities rather than by wealth, a class which is really open to every man of talent, but is, in the main, recruited from the younger sons of the middle class. The liberal professions have inculcated into the entire middle class, otherwise largely devoted to business and financial gain, nobler habits of thought and loftier intellectual aims, thus supplying an ideal counterpoise to the bald egoistic class-interests of other circles. They have perhaps at times influenced both state and society too much in the direction of abstract ideals; on the whole, however, they have become the real exponents of scientific progress, of idealism, of noble purposes. Through their professional activity, as well as by the generally tactful and respectful way in which they are remunerated, our modern class of clergymen and teachers, physicians and scholars, artists and officials exercise an extraordinary influence upon the further development of society and economic life."

In conclusion, two incidental results of this process of development must be mentioned, namely, the chronic overcrowding of the learned professions, and their greatly depressed economic condition. The excessive crowding into the learned professions did not really begin until the nineteenth century; before that time the problem of the administration had been to attract a sufficient number of persons to these callings rather

than to discourage any one. The convicts and stipends of the sixteenth century were instituted with a view to alleviating the scarcity of candidates. Occasional decrees which excluded the sons of the lower classes from a learned career, dating from the eighteenth century, were mainly intended to guard against the effort to escape conscription by means of academic citizenship. It was the increasing respect which university training conferred upon its possessor, that led to the prevailing chronic overcrowding of the professions, especially of law and medicine, which occupied the foremost place in popular esteem.

The other side of the question is the inadequate economic condition of many of the members of academic professions. Professional incomes, even though they have perceptibly increased, are still not sufficient to meet the more rapidly increasing demands which the social standing of the professions seems both to justify and to impose. It is especially true that an income sufficient to support a family comes too late, owing to the long period of waiting brought about by overcrowding. The result is that in the learned professions, either the hope of setting up a family is frequently abandoned, or there exists an onerous disproportion between the income and the unavoidable expenses, or expenses that are considered unavoidable. The more modest incomes of former times really went further in the satisfaction of more modest wants.

It is plain that this unfortunate condition cannot be alleviated by an increase of salaries, nor yet by a multiplication of positions. Increased overcrowding and still longer periods of waiting would be the result. It would not be profitable either to individuals or to the state to bring about or to continue such a condition. Especially would it not be in the popular interest; hence official positions ought not to be made too attractive from a financial standpoint. In case they become too desirable, the eyes of all fathers and mothers, anxious for the future of their sons, will be turned in their direction and the entire educational scheme will aim to fit the boy for an official career. This is the evil from which France is suffering, according to credible statements; everybody is seeking to provide for his sons by placing them in office, hence the entire school system with its drills and "cramming" for the examina-

tions, with its prizes and distinctions for those who best meet the requirements, has for its end the preparation of the pupil for a "career." But the consequence is: loss of independence, of individuality and enterprise, spiritless passivity. The individual either idles away his time waiting for his turn or he eagerly tries to push ahead by cringing and crawling, by assiduous toil and struggle.¹

The plan least open to criticism for securing an income commensurate with the standing of the families of officials is perhaps the one pointed out by a Prussian official (Ministerial-Director Thiel, in an article in the *Preussische Jahrbücher*, April, 1896): He recommends the establishment of free scholarships (*Freistellen*) in boarding schools (*Internate*) to be erected for the older children of officials, similar to those offered by military schools for the children of army officers. This would meet a real need, which occasionally becomes a genuine distress, without calling for a further burden on the public by a general increase of salaries in favor of bachelors already in comfortable circumstances, and of rich families. To be sure, this plan is not without its dangers: it would have a tendency to increase the inbreeding of the official class.

5. *How the Academically Educated Class is Recruited.* In Germany, more than in the western countries, student bodies are recruited from all the strata of society. In the matriculation lists of our universities are found the names of the sons of the noblest families, up to the ruling houses, and the children of insignificant people, shopkeepers, artisans, laborers, teachers, and subaltern officials. They all receive the same scientific education and associate as fellow-students both in work and play, the game of arms included. In England the recruiting field of the universities is more limited, and the cost of living at a college and even at school is so great that only well-to-do families can afford it; the poor are excluded; or, rather, they were excluded, for during the last few decades there has been

¹ All these phenomena have been well observed and described in a book which created a sensation in France a couple of years ago: E. Demolins, *A quoi tient la supériorité des Anglo-Saxons?* Are they also noticeable among us? The author says yes; and it will not be possible to contradict him absolutely.

a slight change in conditions. But in general the universities reflect the aristocratic constitution of society. In Germany they are democratic institutions; they exclude none and put all upon an equality.

E. M. Arndt praises this as an advantage of the German universities: "As a citizen of a university the son of the poorest and most obscure parents, if of sound mind and body, enters upon a career in company with the highest and most aristocratic; and those who are the most daring in spirit, determination, and courage, will, if they choose, rule by reason of an innate nobility. This proud equality, which the narrowness of life scarcely ever reveals afterward, I esteem as among the principal glories of German student life, a precious memorial of what the entire Germanic people once was."¹

But it cannot be denied that a change is taking place. It is not only true that within the student body itself the efforts of a social aristocratic group to isolate itself are constantly becoming stronger, but the number of students drawn from the lower classes is diminishing. The expenses of an education and the period of waiting are constantly increasing; in consequence a large and growing section of the population, the new workingman's class, is not represented at the universities at all. That is the reverse side of the increasing aristocratic tendencies of university life; the demands made on the period of study and the standard of life increase in proportion to their social value.²

It is not without interest to survey the historical development here. During the Middle Ages the students came from the entire population, down to the very poorest sections. A large proportion of the scholars worked their way through college with very little assistance from their families, and not a few continued a practice already begun at school: "they earned their living by begging," for begging was not considered a dishonor, being carried on as a matter of principle by great ecclesiastical corporations. The *pauperes*, who receive everything

¹ *Der Wächter* (magazine), i, 317 (1815).

² The statistics of the social classes represented by the German students are, in more senses than one, inadequate and faulty. But I will add a few facts, supplied by Conrad for the Prussian universities

"for God's sake," are a constant category of the matriculation lists, *nihil dedit, quia pauper*.

The Reformation, which sought to do away with begging by organized charity, brought about a change here also. As already suggested, territorial and ducal schools were established, with free scholarships, and *convicta* were erected at the universities, in order to educate poor but talented boys and young men for ecclesiastical and secular callings. Until the eighteenth century the great majority of students came from poor families, especially the larger part of the theological faculty, which included the teachers; during their residence of perhaps two years at a university those who did not secure a place in a *convictum* were supported by stipends, free board, and by tutoring in families. Side by side with these *pauperes* the "gentlemen" were represented in the law faculty, with a great difference in their standard of living.

The nineteenth century showed an increasing tendency to get rid of the *pauperes*. The length of the course has been greatly increased, especially in the philosophical faculty. A nine years' course in the gymnasium precedes the university

for 1887-1890, and by Cron for the three universities in Baden for 1869-1893. They give the following results:

Fathers of Students	Prussia	Baden
1 Merchants, bankers, shopkeepers, innkeepers...	2416	907
2 Factory-hands, artisans, master-workmen.....	1981	1116
3 Independent agriculturists	1613	715
4 Teachers without academic training.....	1099	487
5 Clergymen	890	238
6 State and city officials with academic training..	888	811
7 Physicians	471	251
8 Teachers with academic training.....	416	195
9 Capitalists	351	362
10 Large landowners	253	39
11 Apothecaries	185	89
12 Officers, members of the reigning house.....	127	87
13 Laborers	12	..
14 Lower class of employees	9	278
15 Artists, musicians, journalists.....	..	69
16 All others	149	..
Totals	12,709	6201

course, the latter is followed by a period of practical training, and after that comes what may under some circumstances be a long period of waiting. The year of military service with its economic demands must also be taken into consideration. On account of all these things an academic course is becoming more and more difficult for persons without means. A hundred years ago conditions were still such that no one with remarkable gifts and strong inclinations was deprived of the opportunity to study on account of poverty. The course of the local Latin school and a couple of years at a university could be completed without serious expense; then came a position as a private tutor (*informator*) or a small place in a school, and this was followed in a few years by a pastorate, unless, indeed, one preferred to try oneself as a *magister legens* at a university. Such was the career of many of our most distinguished men; Kant, Herder, Fichte, Winckelmann, Heyne, Voss, all came from poor families which to-day could hardly think of sending their sons to college, not to speak of preparing them for an academic career.

And the development outlined above meets with popular approval. There is noticeable, especially within the academic professions themselves, a growing tendency to prevent an influx from the lower classes. The social-aristocratic trait, which has become so apparent in the moral physiognomy of the German people during the last generation, also reveals itself in the lively concern of the learned professions for their "class honor." This feeling especially manifests itself in efforts to prevent additions from the families of the lower classes. Formerly the desire was strong to assist gifted boys of indigent families, but the tendency is in an entirely different direction to-day. Hence the question of preparatory training for the university is now largely influenced by the determination not to lower the entrance requirements for fear of lowering the academic class in social value. For this reason the medical societies have always opposed the admission of the graduates of the *Realschule*. Similar arguments are met in the periodicals and conferences of the teachers of the higher schools. It is held that the admission of members from poor and uneducated families is a misfortune; that the sons of tailors and glovers, shopkeepers and peasants, are often lacking in intel-

lectual, and always in social culture when they become teachers, and that they not only expose themselves but the entire profession to the contempt of pupils belonging to other circles, and so lower the social standing of the entire class.

It is certainly not desirable that a learned profession should be largely, not to say exclusively, recruited from the classes below it; even the practical efficiency of the profession might suffer thereby. If, for example, the teachers in the *gymnasium* were to lose their social prestige as a class, so that the sons of wealthy and respectable families would generally scorn to enter the profession, and only those should choose it who regarded it as the cheapest and quickest road to an academic berth, it would naturally lose the power to educate the leading classes.

And there is also considerable danger to the individual in studying without sufficient means. Poverty is a heavy burden both during and after the course. When a student is compelled to give private lessons to support himself, he loses time and strength and vigor for the free pursuit of knowledge. Unless this hindrance is counterbalanced by extraordinary gifts and great energy, and last but not least, by splendid health, the course becomes a long and finally useless struggle with want, frequently ending with failure to pass the examinations. And even in case this peril is successfully overcome, there follows a further test which exhausts the already failing energies, namely the time of probation and waiting which bars the entrance to every calling. One should, therefore, seriously consider, before taking such a step. A foolish decision, favored by the vanity of parents or the levity of youth, is frequently atoned for by much misery and final failure.¹

On the other hand, it cannot be denied that the complete exclusion of the poorer classes from the academic world has its great dangers. Talents would be lost to the nation which nature does not bestow upon it all too lavishly. An individual possessing superior gifts and a strong will, who is restricted to a sphere in which he cannot develop and utilize his talents merely

¹ A vivid description of the sufferings of the poor medical student in Vienna, who usually hails from the Jewish population of the East, is found in Billroth, *Lehren und Lernen der medizinischen Wissenschaften*, p. 148 ff.

from a lack of means, would be forced to the severest kind of renunciation, and would look upon it as a bitter humiliation. And, finally, the solidarity of the nation would thereby be imperiled. An academic official class, no longer chosen as a kind of personal aristocracy from the entire people, but only from the wealthy families, and posing as a kind of committee of the wealthier classes, would be looked upon by the people with distrust and aversion as an alien rule. We are still far removed from such a state, for the recruiting area of our universities still extends far down into the classes which are not wealthy; nevertheless such feelings have long ago taken root in that broad stratum of our population, the laboring classes of our large cities, whose social self-consciousness is expressed in the Social Democracy. Another thing: with the erection of further barriers the sympathy of the academically trained for the masses would become even weaker than it is; a cruel class pride and foolish sentimentality would make the haze of prejudice and misunderstanding which even now so often dims the eye of the ruling classes completely impenetrable. It cannot be doubted that the great influence which the Catholic clergy exercises upon the masses is largely due to the fact that its membership is drawn from all classes of the population, more especially from the lower strata, the peasantry and artisans. The priests know the people, sympathize with them, and are looked upon by the people as their representatives among the higher classes.

How is this danger to be met? The method adopted by the sixteenth century of training the gifted sons of poor parents for the public service at the expense of the state in public schools and the *convicta* of the universities, can scarcely be followed to-day, with the supply so far in excess of the demand. Survivals of the old methods are still in existence and in operation: the free scholarships and stipends at schools and universities. It is true that, owing to the increased expenses and the increasing number of students, they are no longer of much consequence. A material extension of the system under present circumstances is scarcely possible, and would bring its own dangers. The situation must, therefore, in the main, be left to private effort. And, as a matter of fact, wealth has here a

fine field of usefulness, first and foremost in the support of individual students, but also in founding adequate scholarships in educational institutions of every grade. The state, however, can do one thing: it can make the approaches easier from the lower schools to the university; the easier the passage the sooner can those of decided talent pass from the lower strata into the academic professions; I am also thinking of the so-called "Reform Schools."

In closing the consideration of this subject let me add a few utterances in which the feelings of an earlier time are expressed.

Luther, who experienced poverty in his own youth, once said: "The children of the rich seldom amount to anything. They are self-confident, arrogant, proud, and imagine that they do not need to learn, because they already have enough to support them. The sons of the poor, on the contrary, must work up from the dust, and suffer much. And because they have nothing of which to be vain and of which they can boast, they learn to have faith in God, are humble, and keep quiet. The poor fear God, hence He gives them good heads, so that they can study well and learn, become well informed and sensible, and can teach princes, kings, and emperors with their wisdom."¹

In the same strain Jacob Grimm sings the praises of poverty: "Need spurs one to diligence and labor, guards against many distractions, and instils a not ignoble pride, which is kept alive by a consciousness of personal worth, over against the pride which position and wealth give to others. I am even inclined to make the assertion general and attribute much of what Germans have accomplished directly to the fact that they are not a wealthy people. They toil from the bottom up and open for themselves many individual paths while other peoples keep rather to a broad and level highway."

One cannot but think of the poverty in which our entire German university life was spent down to about the middle of the nineteenth century, and compare it with the luxury in which the English universities and colleges lived. Think of what the single University of Halle, with its ridiculously small endowment (to 1786 only 7,000 thalers per annum), with its poor students and its poorly paid professors, has done for science

¹ Cited by Jürgens, *Luther*, i., 152.

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and for the culture of the German people, compared with Oxford, spending its inherited millions in hereditary indolence.

6. *Fluctuations in the Attendance.* I add a remark, by way of appendix, on the fluctuations in the number of students in general and in the several faculties. They reflect the variations in the strength of the social needs.¹

- In Germany and the countries of similar culture-conditions the figure for the number of students attending the university is about one-half per thousand of the population. In the nineties France had 43 students for every 100,000 inhabitants, Germany 48 (including theologians 57), Italy 51, Austria 56, while the maximum was reached in Norway with 77 and Belgium with 82 students, figures which are explained by differences in the preparatory system, making necessary a longer course at the university. The minimum is furnished by Russia with 10 students. But the figures are not constant; they move with considerable variations about a variable mean. Since 1830, the attendance in Germany has fallen as low as 33 for every 100,000 souls in the forties, and has gone as high as 63 at the close of the eighties. The several faculties show special variations.

Just a word concerning the cause of this phenomenon. The variations may be compared with the movements of a river. A stream with a shifting fall has its pools and rapids. So also the stream of students which runs through the learned professions. There are successive periods in which the ability of society to assimilate persons with academic training is greater or less. When the number of positions is stable, vacancies rare, and the supply large, a state of congestion ensues. There is little movement into the profession in question, the waiting period is increased, and all these factors react upon the attendance at the university. When the congestion has been relieved by a diminution of the supply, an increase of positions, and more vacancies, the prospect of rapid promotion encourages

¹ I take the figures from Conrad's article, *Allg. Statistik der Deutschen Universitäten*, in the work published by Lexis. An earlier, thorough investigation of statistical conditions is found in Conrad, *Das Universitätsstudium in Deutschland während der letzten 50 Jahre*, 1884; and *Statistik der Universität Halle während der 200 Jahre ihres Bestehens*, 1894.

attendance upon the university. It regularly happens, however, that here as elsewhere in the economic world, speculation overrates the favorable opportunity or, at least, its duration; too great crowding speedily causes an oversupply of candidates waiting for places and again leads to congestion.

In addition to this cause, which is dependent on the general nature of economic and social conditions, supply and demand, and speculation, there are variations in the attractive power of the academic professions. The attractiveness of a profession really depends upon two factors, the comparative size of the income and the social standing of the calling. Both of these vary for the academic callings among themselves as well as relatively to the non-academic professions. When the salaries of the academic callings appear large in comparison with the incomes of other professions, their attractiveness is increased, and is still further enhanced by the security of tenure which they offer. If, however, the salaries appear meagre in contrast to what the industrial and commercial callings offer, the supply decreases with this decrease of attractiveness. Accordingly, periods of great industrial prosperity, with large and quickly achieved returns, have a tendency to reduce the number of academic students. The case is complicated, however, by the very opposite effects of the same condition; increasing prosperity has a tendency to increase the demand for physicians, lawyers, and teachers, and enables a larger proportion of the population to secure an academic education by increasing their incomes and the number of the schools.

No less than its income the social standing of a profession acts as an attractive force. It is dependent upon numerous factors, especially these two: the official gradations in rank, and public opinion. The latter by no means depends entirely upon the former, but rather upon the public estimate of the intellectual significance of the profession and the value of the science upon which it depends. And this is a variable factor. Theology for example, compared with earlier times, has fallen considerably in the public esteem, while the natural sciences have made extraordinary gains during the past half century, and with them the professions which are theoretically based upon them, such as medicine and technology. Nor is the signifi-

cance attached by public opinion to the official gradations of rank a stable quantity, but varies with the authority of the state itself. During periods in which the relations between the people and the government are strained, the value of rank, the dignity of a government position, and consequently its attractiveness will decline. This is the explanation of the great decrease in the attendance of the law faculty during the fifth and sixth decades, and the newly acquired dignity of the government accounts for the increase in the figures after 1866-70.

The effects of these variations are by no means desirable. For the individual the periods of congestion are painful and not seldom ruinous in consequence of the extremely long period of waiting. Nor are they desirable from the standpoint of the general good. The delay caused in entering the profession frequently results in putting discontented, worn-out, half-broken individuals into office, while others increase the numbers of the "learned proletariat." But neither are the periods in which the stream runs rapidly, in which candidates quickly find positions, favorable to the general weal, for then it frequently happens that incompetent candidates are appointed merely in order to keep the positions filled. Thus, for example, when there is a great dearth of gymnasial teachers and clergymen, persons are often appointed who are entirely devoid of an inward calling and who, under normal conditions, would have been refused as entirely incompetent. But the situation has its danger for the individual also; it is possible that the period of quiet preparation will be unduly shortened merely in order to secure an office quickly.

It would also, doubtless, be a matter of some importance if the stream could be so regulated as to flow with tolerably uniform velocity, without pools and rapids. And even though a regulation fixing the number of students to be admitted each year, could not be enforced, another scheme does seem feasible. If the administration would systematically ascertain the demand for candidates as well as the supply and the additions (reasonably accurate data for all of which seem to be supplied by the statistics of the civil service, including the average number of vacancies, and on the other hand, by the statistics of schools, universities, and examinations), and if it would regularly pub-

lish the facts thus gathered, together with necessary explanations, the chances of appointment and the duration of the waiting period might be calculated to some extent in the several branches of the academic callings, and individuals might govern themselves accordingly in their choice of a profession. Warning or encouragement would at least tend to help some irresolute ones to come to a decision; and even that might suffice to prevent such severe crises as now not infrequently occur.

The time may come when statistics, which are only a couple of decades old in this department, will be able to secure data to some extent reliable. Thus far this has not been possible. The last great disappointment is still in everybody's memory: from a period with an enormous supply of candidates for teaching positions we have unexpectedly passed to a time of great dearth, a time which statistics had supposed to be very remote. Numerous influences are at work here whose precise value it is almost impossible to fix. However, this is not a favorable prognostic for the future socialistic state, which, as we know, could not decline the task of regulating the choice of professions.

In conclusion, let me add a few data concerning the attendance in the different faculties. They reveal a general movement which points back to changes in social demands. Following Conrad, I contrast the figures of 1831-36 with 1892-93. The evangelical theological faculty shows a slight absolute increase from 3,103 to 3,601, while the Catholic has remained stationary, the number being 1,310. But its percentage of the entire student body has materially decreased: the evangelical theologians in 1831 made up 24 per cent. of the entire number of students, while in 1892 they constituted only 13 per cent; the Catholics in the same years comprising 10 and 4.7 per cent. respectively. The number of jurists has risen from 3,642 to 6,969; but their percentage has suffered a slight decline, from 28 to 25. The number of medical students has increased from 2,579 to 8,171, and the percentage from 19.8 to 29.5. Finally, the group which matriculates in the philosophical faculty (including agriculturists, pharmacists, and dentists) has increased from 2,395 to 7,686, and its percentage from 18.4 to 27.4.

I add, also, the figures which show the ratio to the popula-

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tion. In 1831-36 there were 137 evangelical theologians for every 100,000 Protestants, and in 1892-93 114.5. In the same years, there were 100.3 and 72.8 Catholic theologians for every 100,000 Catholics (counting only those theologians who studied at a university). For every 100,000 of the population there were, at the same time, respectively, 109.7 and 140 jurists, 78.3 and 165.3 medical students, and 83 and 155.2 philosophers.

It can be seen that the number of theologians has not kept step with the increase in the population, while the jurists, and, even more rapidly, the medical and philosophical, students have increased. Taking the student body as a whole, the jurists form the stable element, always about a fourth of the whole; the theologians are constantly decreasing in numbers, falling from one-third to nearly one-sixth; while on the other hand the students of medicine have increased from one-fifth to three-tenths, and the philosophers from less than one-fifth to more than one-fourth.

That is, the ministry has lost in social importance, in the power to satisfy the social needs, while the vocations of the physician and teacher have gained in scope and importance: the sense of their necessity has grown both extensively and intensively. This would describe, in a word, the entire movement of social life, as it is reflected in the statistics of the faculties.

CHAPTER III

THE RELATION OF THE UNIVERSITIES TO THE CHURCH

THE relation of the universities to the church, originally so close that the universities of the Middle Ages and even those of the sixteenth century might be described as to their general position, though not from an administrative standpoint, as a part of the "ecclesiastical state," has gradually become less close since the middle of the seventeenth century. During the eighteenth century they belonged to the secular state, and during the nineteenth century they have, like the state itself, almost entirely divested themselves of their ecclesiastical-confessional character. As the heir of the church the state has also assumed the control of instruction and the academic examinations and degrees.

One thing has survived in which the universities coincide with the church, namely, the theological faculties. From a legal point of view these are, of course, also state institutions, and the professors of theology are state officials just as much as those of the other faculties. But they nevertheless stand in an indissoluble relation to the church; it is their function, historically and in fact, to equip the clergy of a particular church with the education demanded by their calling. And so we have in Germany the peculiar condition that the servants of the church receive their education in state institutions from state officials.

1. *The Protestant Theological Faculties.* The Protestant established churches easily adapted themselves to this arrangement from the very beginning. Closely identified with the state (the sovereign being, as such, the "supreme bishop," his counselors in the consistories, the agents of church polity), they found no fault with the fact that the theological professors

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were also state officials; for were not the clergy themselves, in consequence of the thorough unity of state and church, semi-state officials? Frequently, indeed, the professors of theology took part in the government of the church; and it should be remembered that Luther and Melancthon were university professors.

Only recently has the relation become a somewhat more delicate one. The cause for this lies in the growing estrangement of state and church. The German states abandoned their confessional unity during the nineteenth century, Prussia leading the way as early as the eighteenth century. To this must be added the change in the character of the government. The governing power is now exercised by ministers who, upon the floor of parliament, where all the confessions are represented, are compelled to take account of constitutional methods. Hence the Protestant churches have also begun to look upon the supreme authority of the state as an alien government.

This accounts for the efforts to secure a greater degree of freedom from the political power. The agencies of these endeavors are the synods, in which the clergy have retained a kind of political organization. The chief demand is that the general synod, through its committee, have uniform influence in the appointments to the theological professorships. (As early as 1855 the *Oberkirchenrath* in Prussia was given the right to make recommendations with respect to such appointments.) The basis of this demand is the independence of the church. It is intolerable, it is held, that she should have no sort of assurance against the possibility of students of theology receiving their education, and consequently an anti-ecclesiastical bias, from "unbelieving" instructors. If it is the duty of the church to preserve a pure system of doctrine she must have the power to exert a controlling influence upon the choice of teachers.

In reality, therefore, it is not a question of freedom, but of power; namely, of the power of the church, or, rather, of the dominant theological faction, over the theological faculties; she wishes to impose her interpretation of "doctrine" as the criterion of what ought to be taught in the universities; the exclusion of heterodox instruction is the goal. The evil to be removed is

that the state is altogether too liberal in the matter of doctrine. The Minister of Public Worship and his advisers are politicians who do not take purity of doctrine seriously enough, and who, especially, as the official representatives of science, are too much inclined to overlook aberrations in doctrine in case they are promulgated by men of recognized scientific standing.

What shall we say to these efforts? It is evident that with an enlarged "freedom of the church" neither the freedom of theological science nor the freedom of individual interpretation and acceptance of doctrine would be enhanced, the object, indeed, being rather to restrict it. I believe, however, that even the church would not be a gainer by such a process. There can be no doubt that Protestant theology especially would suffer both in power and significance if it were placed under the control of the church and her organs. What it is and does it is and does as a free self-developing science; and only as such, only in constant interaction with the other sciences, with philosophical and philological-historical investigation, can theology really live and prosper. A Protestant theology based merely upon the authority of the church would have no value at all. The Protestant church herself has no authority, none except that which she wins for herself from day to day by her achievements. She is not founded upon an external authority and cannot, therefore, justify either herself or her doctrine by any such authority; in this respect she will always be at a disadvantage in comparison with the Catholic church, if it be a disadvantage. But for this very reason the Protestant church could not thrive even with such a "freedom," the freedom, namely, to restrict research and science, faith and conscience. She must appeal to the free convictions of individuals; how could she do that without being ready to give a satisfactory answer to scientific criticism? The Catholic church rests upon the principle of external authority and proposes to employ it so far as she can. But the Protestant church has nothing with which souls can be compelled: no unity, no organon of doctrine, no means of discipline, no *exercitia spiritualia*; she has nothing but the "Word of God" and the power with which this seizes upon the heart and conscience, together with the memory of men who, depending upon the "Word," dared to withstand

human authority, even the organized authority of the "church universal." That a fixed norm of doctrine, which leaves the teacher and preacher with an office but without an opinion, cannot be serviceable to such a church can only be denied by a judgment blinded by lust for power. If a party should ever succeed in bringing Protestant theology and doctrine under its control for any length of time, the church which calls itself by Luther's name would become a feeble imitation of Romanism and would finally be absorbed by it. Christianity would even survive that, just as it has heretofore been equal to every emergency; perhaps it would issue from the depths of our national life in an entirely new and independent form. But whoever prefers a Protestant church must not deprive her of an independent theology or the freedom of scientific endeavor, and therefore must not deliver the theological faculties into the hands of an ecclesiastical party. The public administration of the universities is the neutral court which has thus far guaranteed the independent development of Protestant theology and can best guarantee it for the future. If theology and theological study are to be placed under ecclesiastical control, a further step should be taken and the preparatory training of the clergy turned over, as in the Catholic church, to the ecclesiastical seminaries, in which only "approved" sciences are taught. This would, of course, call for a still further step: the establishment of an infallible teaching corps, which would simply mean Catholicism. If this is not desirable, or rather, if it cannot be done; if the Protestant church cannot have an infallible teaching corps, then she cannot claim to possess the absolute truth; she can believe in a revelation from God, not in the form of communications to an authoritative teaching body, but in a revelation of God in history and in the Bible, which is really nothing but history or the precipitate of historical life. Hence she requires a scientific theology as a path-finder for a developing comprehension of the word of God in the Bible and the ways of God in history.

But a willingness to hear and to understand what the facts say must be presupposed. If a "believing" theology is demanded among Protestants, it must be insisted that here no other "belief" is possible than the faith which approaches the

Bible and history with a willingness to receive them for what they are, in the hope that in them are contained truths so important for mankind that they deserve to be regarded as revelations of God. Usually, however, the representatives of the demand for "orthodoxy" mean something else by that term, the disposition, namely, not to subordinate one's views to the given historical and literary facts, but to adapt these facts to a preconceived theory, which means, to subordinate oneself to the theory approved by the hierarchy, or the theory which has a majority of adherents in the synods. He who cannot adopt this theory is then outlawed as an unbelieving critic who places his own subjective opinion above "the faith of the church." It is true that even the most earnest investigations are conditioned by personality, but such subjectivity has at least the advantage of honesty and a good conscience.

2. *The Catholic Theological Faculties.* The Roman Catholic church sustains an entirely different relation to the state, and, consequently, also to the problem of the training of the clergy at the universities.

The Roman church is an independent world-power side by side with and, in a certain sense, above the secular states, superior to them on account of the extent of her territory, the age and compactness of her organization and her government. Her territory extends over all the continents, she has seen the beginning and the end of unnumbered states; she has fought and overcome the empire of the Roman Cæsars; she has wrestled with ancient philosophy and science, appropriating or rejecting them as she found them suitable or not; she is in possession of an infallible teaching authority and of absolute truth. Such an historical world-power, organized as no other for the control of souls, will not allow herself to be deprived of the right to regulate the education of her servants. As a matter of fact, this right is substantially conceded to her everywhere, in Catholic as well as in Protestant states. She makes a twofold use of it: she establishes and controls her own institutions for the education of her clergy, and she exercises a controlling influence in the filling of the theological professorships in the state institutions and supervises the instruction. It is true that the professor of Catholic theology is also appointed

by the state, but with regard to doctrinal instruction he acts entirely as the agent of the church.

I shall first point out, briefly, the historical development of this condition of things. The right, or rather, the duty, of recruiting the ranks of the clergy has always been, primarily, the bishop's. The cathedral school was originally nothing more than the nursery for the secular clergy of the diocese. During the second half of the Middle Ages the universities became the bearers of scientific life and instruction. The faculties of arts and theology expressly, and the faculty of law actually, devoted themselves to educating the clergy for their all-embracing calling. The universities were overwhelmingly ecclesiastical institutions, not, indeed, in respect of their administration, but, what is more important, in their essential character: the church was the mistress of instruction, the Pope established the institutions, by bestowing the right to teach and confer the degrees, and by means of the chancellorship the university was kept in formal connection with the ecclesiastical organization.

During the sixteenth century this close relationship between the university and the church was threatened with disruption. The tie had ere this been loosened by the previous development of science and education on the one hand and of the state on the other. The church then determined to restore the old conditions. Because of the great scarcity of priests and the deplorable condition of the universities which had remained Catholic, the Council of Trent made it the duty of bishops to establish seminaries for the clergy in their dioceses. Consequently there arose, in all the Catholic countries, episcopal schools, with *convicta*, in which the clergy received their philosophical and theological instruction. The control of these institutions was placed, for the most part, in the hands of the newly-founded order of the Jesuits, which may be precisely described as an order of professors. Although these seminaries were at first only regarded as necessary makeshifts for the universities, intended especially for poorer students, the gradual development was such that the old theological faculties in most of the purely Catholic countries, Italy, France, and Spain, ceased to exist at the universities, and the Catholic clergy there

now receive their education exclusively in ecclesiastical seminaries. On the other hand, the faculties in the German Empire, as well as in Austria-Hungary, not only continued in existence, but new ones were added, so that both forms now exist side by side in these countries.

One will not go far wrong in recognizing, in the maintenance of Catholic theology as a branch of university instruction in these countries, an indirect result of Protestantism. If Protestant theology ought to be represented at the universities of Protestant countries, it would seem that the parity of creeds in the empire demands Catholic faculties of theology also. Nor has the continuance of Catholic theology been without significance in connection with the university sciences. That a scientific Catholic theology can still be spoken of in the nineteenth century is really due to German university scholars. To be sure, this is probably a doubtful service in the opinion of the Roman Curia; those who are concerned more for the security of the government than for the recognition of the truth, the politicians, who are found as well in the church as in the state, always have a very poor opinion of scientific research; they esteem it only in so far as it can be made to serve the government; but in so far as it seeks the truth without regard for the necessities of government it becomes dangerous. For this reason the historical as well as the dogmatic theology of the German universities has constantly been an object of suspicion and offense to the Curia. This is shown by the long series of conflicts, running through the entire nineteenth century, from the great campaign against Hermesianism to the expulsion of Old-Catholicism and the more recent disciplining of Schell. It seems plausible that, among the causes leading to the Vatican Council and the acceptance of the dogma of papal infallibility, the desire for readier methods of taming the German university theologians was not the least. The year 1870 marked a turning point. Since then Catholic theological literature, which before that time had shown such a remarkable rejuvenescence (it is enough to mention the names of Döllinger, Möhler, and Hefele), has suffered a decline. Independent thought has been crowded out by the new scholasticism recommended, not to say enjoined, by Rome, and by the ultra-montane controversial liter-

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ature. All this is very plainly shown in the review of the development of Catholic university theology during the nineteenth century, as it is given by the representatives of this very theology itself in the work published by Lexis on the German universities.

To this historical orientation let me append a review of present conditions.

At the present time there are seven faculties of Catholic theology in the German Empire: at Bonn, Breslau, Münster, Munich, Würzburg, Tübingen, and Freiburg. Their legal status is as follows. From the administrative point of view they are, like the other faculties, state institutions; the professors are appointed and paid by the government, and, in respect to the performance of their general official duties, are under governmental control. But with regard to doctrine, on the other hand, they are under ecclesiastical control: they must have the approval of the bishop in order to teach. In Prussia the coöperation of state and church is secured by the faculty-statutes, which prescribe that the government's candidate, who is, as a rule, proposed upon recommendation of the faculty, shall be referred to the bishop, who has the right to reject him "because of serious doubts concerning his orthodoxy or his conduct." The bishop also has the right of superintendence. He has visitational power, the lecture-schedules must be submitted to him, and in case a professor "should offend against Catholic faith and practice in his class lectures or publications, instead of confirming them, or if he should otherwise give occasion for grave scandal concerning morals or religion, the archbishop is authorized to notify the government of the fact, and the university, upon such notification, shall earnestly and emphatically interfere and provide a remedy."¹

But in case the desired remedy cannot be secured in this way, there remains at the disposal of the episcopal power another means for the achievement of its end. It can paralyze the efficiency of the teacher objected to, even though it may not deprive him of his office, simply by prohibiting Catholic students of theology from attending his lectures. This method has been frequently resorted to with satisfactory results.

¹ The statutes of Breslau, in Koch, *Die Preuss. Univers.*, i., 233.

Besides the faculties there are also vicarious institutions, if we do not include the lyceums (smaller institutions supported by the state, of which there are six in Bavaria, and among which must be numbered, also, the *Lyceum Hosianum* in Braunsberg), namely, the theological seminaries. Of these there are now eight, five of them in Prussia: Paderborn, Fulda, Treves, Posen, Pelplin; one at Mainz (in place of the defunct faculty at Giessen), one at both Strassburg and Metz in Alsace-Lorraine. The establishment of a faculty at the university of Strassburg in place of the seminary at that point is at present under consideration.

The seminaries differ from the faculties in that they are ecclesiastical institutions not only with regard to doctrine, but also in the matter of administration. They offer a complete theological course, but cannot confer degrees. Since the state will not recognize their course of instruction, as a substitute for a university course, unless their instructors possess the legal qualifications demanded of university professors, which means, especially, that they hold the university degrees, the seminary professors are compelled to secure their education, or at least their theological degree, at a university. In this way the latter is, of course, acknowledged as the higher, the real scientific educational institution. Nor does the ecclesiastical character of the seminaries exclude the state's general right of supervision. Their courses must be recognized by the ministry of education as suitable substitutes for those of the universities. And, finally, the instructors must be subjects of the German Empire.¹

¹ The current regulations for state supervision date from the period of the so-called *Kulturkampf*, after the earlier right of supervision by the state had been given up during the fourth and fifth decades of the 19th century. By the law of May 11, 1873, education for the ministry was regulated as follows for both confessions: It is necessary (1) To pass the final examination in a German gymnasium, (2) To complete a three-years' course at a German university, (3) To pass a state examination in philosophy, history, and German literature. Clerical seminaries were not formally suppressed, as were the boys' seminaries, which were prohibited from receiving new pupils, but it was decided that the course in a seminary could be substituted for the statutory university course only on condition that the course should

I turn now to a consideration of the significance and value of the ecclesiastical educational institutions. Both within and without the sphere of Catholicism there exist two diametrically opposed views concerning the value of and the necessity for the faculties. Within the church a radical and a more conciliatory party are at war. The former, organized in the Jesuits, and just at present in control of the Curia, for the reasons already indicated, looks with constant and lively distrust upon the theology of the German universities, and is, in general, not favorable to the university education of the clergy. Incorporation into the academic world, it is feared, will lead to more and more dangerous contact with the spirit of the German universities, the spirit of freedom and independence of thought, and that, too, in spite of every precaution and the most thorough good faith on part of the instructor and student. And even though this contact merely acts as an irritant to opposition, it is nevertheless dangerous, for even contact in conflict leaves its impression. Only the education which is had within the walls of the seminaries is thoroughly reliable; there only absolutely trustworthy agents of the church are trained, determined men, who will take up the struggle with the world for the control of the world.

first be submitted to the Minister of Education for his inspection and approval. Since the bishops refused to subordinate their institutions to state control in this way, they were closed, so that, in consequence, only the state-faculties remained as the recognized educational institutions for the Catholic clergy. In spite of this, however, the attempt to make the education of the clergy more dependent upon the state has failed, just as other similar efforts on the part of Joseph II. and Napoleon I. had failed. Because of the opposition of the church, attendance upon the state-faculties almost ceased entirely, and the attempt merely had the effect of nearly putting an end to the entire study of Catholic theology in Prussia. After the state gave up the struggle the seminaries resumed. The supervision of the state is now recognized, but the institutions enjoy perfect freedom. The state examination in philosophy, history, and literature has also been abandoned, after plaguing for a time the Protestant theologians, who were also subject to this regulation. That nothing was lost by abolishing it, especially not for education, has been shown by P. de Lagarde in an annihilating criticism (*Deutsche Schriften*, pp. 135 ff). It is to be hoped that the teachings of history on this point will not be forgotten.

The other tendency, represented primarily among the Catholic university professors themselves, fears precisely the isolation of the seminaries and its consequences; it aims to bring Catholicism into touch with the science and culture of the times, in order to guard it against the limitations and impoverishment peculiar to the self-sufficient seminary education. With shame it recognizes the backwardness of the Catholic portion of the German people in science and literature. It looks to the Catholic faculties for an impulse to a freer, stronger, aspiring form of Catholic character and life. It hopes ultimately to make its influence felt at the universities themselves, and upon the entire circle of Catholic students, and not merely upon the theologians. The Catholic student societies are of importance in this respect: isolation, is the conviction, means renunciation of efficiency.¹

A similar conflict of opinions is met with on the non-Catholic side of the controversy. An anti-ecclesiastical radicalism, although actuated by opposite motives, agrees with the conclusions of the Curia. Permit the Jesuitical tendency to have its way, it is argued, and you destroy the Catholic faculties. The universities and science will lose nothing thereby: the Catholic faculties and the professorships affiliated with them in the philosophical faculties, are disturbing and alien elements in the organism of our universities. And the further consequence would also be desirable: the isolation of the theological students in the seminaries will lead to the impoverishment of their scientific education and therefore to the impotence of the Catholic clergy. The supremacy of Jesuitism in education will have the same result it once had: it will lead to the retrogression and impotence of Catholicism as in the days of the

¹ A strong and skillful defense of the faculties against their Jesuit opponents, occasioned by the proposed establishment of a new Catholic faculty at the University of Strassburg, is made by F. X. Heiner's article, *Theologische Facultäten und Tridentinische Seminare*, 1900. Concerning the long struggle between the two tendencies in the church, which for the present has ended with the victory of the Jesuits and the demagogic press over the bishopric and university theology, see the first volume of Friedrich's *Geschichte des vatikanischen Konzils*.

Aufklärung, when it was evident to all the world and was even admitted by the Catholic powers and by the church herself.

He who is not in the habit of thinking and acting according to the maxim: Let us do evil or permit it to be done, because, since evil is self-destructive, good must come out of it, will scarcely agree with this conclusion. We certainly cannot wish that the German people should once more experience the misery of the seventeenth century, due to the isolation and separation of the creeds from each other. Neither can we wish, therefore, that the Catholic clergy should be entirely estranged from our national life by an exclusive seminary training; nor, recognizing the circumstances in which we live, can we wish that so important a part of our national life as Catholicism actually is and, so far as human judgment is concerned, will always be, should not be represented at all at the universities, the centers of our intellectual and scientific life. The same illusion might result to which was in part due the origin of the unfortunate *Kulturkampf*, from the consequences of which we are still suffering, the illusion, namely, that Catholicism, at least in Germany, is dead. Precisely the same painful awakening as we experienced at the close of the *Kulturkampf* would follow such a piece of self-deception.

And, further, we ought not to cease to hope that the independent spirit which seeks to assert itself in the Catholic theology of the German universities to-day, may again become influential within the church herself and assist in preparing the way to the more friendly relations between the creeds which once existed. Yes, I will not even renounce the hope that the German spirit may once again impart quickening intellectual and religious life to the Catholic church as such. This spirit would render a service to all the peoples whose historical institutions are rooted in Catholicism, if it would counteract, within the church herself, the inflexible and absolute Romanism, by its freer, deeper, and more personal religious life. That the case in this respect is not entirely hopeless, that the triumph of Romanism within the church is not necessarily a final one, is indicated, beyond the boundaries of Germany also, by a variety of movements within Catholicism itself, in countries where the English tongue prevails, especially in America. If Catho-

cism expects to live,* if it does not wish to cast its lot exclusively with the decaying group of nations, it will be compelled once again to submit to the influence of the Germanic spirit. It is not imaginable that that spirit will permanently permit itself to be subdued by the spirit of a commercial church versed in political routine. Something of Luther's indignation against "human ordinances" and "justification by works" is native to all Catholics of Germanic extraction.

Of course, the final presupposition for this view is that the existence of Catholicism be regarded as fully justified, and justified in German territory. There are many who do not admit this, who look upon it as a great misfortune for the German people that the Reformation was not universally successful and did not bring about a united Protestant national church. But I cannot regard the course our history has taken as a misfortune, in spite of the fearful conflicts engendered by religious division and in spite of the ensuing retardation of our progress as a people. I am of the opinion that a German national church under the control of the state would have had sinister consequences for the entire life of our people, and, if it could be accomplished, would necessarily have such consequences to-day. A system of ecclesiastical Cæsarism would be worse than the division of churches, for it would strangle both intellectual and political freedom. The existence of Catholicism, or what it amounts to, the tension between the creeds, seems to me, strange as this may sound to many, to be a guarantee of liberty in the German empire: the Catholic party, as the natural minority, will always jealously guard against any encroachments of the secular power upon the intellectual-religious life. And for Protestantism also contact with Catholicism is indispensable, compelling it, as it were, to keep its own vital principles clearly in mind.

These considerations lead me to look upon the Catholic theological faculties as a valuable inheritance of the past which is worthy of perpetuation and cultivation.

That these faculties, dependent as they are upon an external teaching authority, occupy a peculiar position at our universities, cannot be denied. If the universities are viewed as institutions entirely or principally devoted to scientific research,

then, certainly, it must be confessed that men for whom the results of investigation or the content of instruction are fixed beforehand are out of place at them. But the universities are not merely scientific institutions; they are historically and as a matter of fact at present equally or primarily institutions for the education of certain professions, those namely which require an academic preparation; and not only the church but the state has an interest in including the Catholic clergy among this class.

Moreover, it would be to misconstrue the character of the Catholic faculties to regard the traditional instruction enjoined by the church as their only function. They also offer opportunities for independent thought and scientific work, as, for example, in the inexhaustible field of church history. Furthermore, other faculties are not entire strangers to a prescribed content of instruction by an external authority. Passing by the survivals of an earlier similar restriction of the Protestant theological faculties, it is a fact that the content of instruction is, to a certain extent, prescribed for the juridical faculties. They recognize it to be their task, not to discover the law by means of untrammelled scientific investigation, as was the case with the old "natural right," but to deal scientifically with the law prescribed by the statutes, or to shape it into the form of a dogmatic system, not essentially different from the manner in which Catholic theology shapes the prevailing doctrines into a system of dogmatics. Of course, the jurist is not prohibited from assuming a critical attitude toward the law, at least not so far as particular laws are concerned. A rejection of all law, and the authority which imposes it, would doubtless be held to be inadmissible, however. But the Catholic theologian also, the recognition of ecclesiastical authority being granted, still has considerable "elbow room," even in dogmatics and morals, not to mention certain neutral fields of investigation. Hence the difference should not be pressed too far: it exists, but is not absolute.

On the other hand, the demand may also be made that the difference be not increased by still further diminishing the degree of independence heretofore granted to the faculties. Given the nature and constitution of the Catholic church, and the

Catholic faculties cannot have the same independence of ecclesiastical authorities as the Protestant faculties. But nevertheless, if they are to be of sufficient value to the state to induce it to defray the expenses of their support, they must be something more than theological seminaries incorporated with the universities. A greater influence of the church than that granted to the bishops at the Prussian universities by statute would be utterly inadmissible. Should the bishop's right of protestation in the filling of a professorship be extended into the right of presentation, which would amount to a nomination, should the right of complaint be extended into the right of deposing the objectionable individual and demanding the substitution of a satisfactory person, then such a faculty would certainly no longer not only be inconsistent with the character of a university, but with the nature of the state also, for it would mean the destruction of all the fundamental principles of the appointing power, even an attack upon the sovereignty of the state itself. The state which would permit itself to be degraded into a mere servant of the church, as its "secular arm," would suffer the loss of its own honor and dignity. If a Catholic theological faculty at Strassburg is to be had only on such conditions, it will be wiser to give it up and allow things to remain as they are. To permit the episcopal seminary to remain substantially as it is, and to grant it in addition the repute which connection with a German university bestows, would mean such gratuitous concessions to the Curia's lust for power as would infinitely increase its already overweening confidence in the state's complaisancy.

At two of the Prussian universities there is an arrangement historically connected with the existence of Catholic theological faculties, namely, the dual professorships in certain departments of the other faculties at the universities of Breslau and Bonn. At these two institutions the chairs of philosophy and history in the philosophical faculty, and of ecclesiastical polity in the law faculty, are each filled by a Protestant and a Catholic. The corresponding dual professorship of history at Strassburg, which recently gave rise to so much excited debate, is merely an imitation of this example.

The charter for the establishment of the university of Bres-

lau points out the reasons which first led to such an arrangement at this institution: "for the comfort of our Catholic subjects" the chair of philosophy shall be held by both a Catholic and a Protestant instructor. Similar considerations, it seems, led to the extension of this system to the chair of history in 1853, and now to its introduction at Strassburg: the idea was to remove the apprehension that the universities of an overwhelmingly Protestant state had no place for certain educational needs of Catholic students. At first provision was made for a course in philosophy by a Catholic teacher, primarily, doubtless, for the sake of the students of Catholic theology, which is so closely related to the scholastic philosophy that a course in philosophy by an instructor thoroughly familiar with scholasticism must certainly be recognized as a necessity. At first, however, there was no obligation whatever to teach any given system. Since the Curia has adopted the system of Aquinas as the one approved by the Church, the transference of the Catholic professor of philosophy, who has now become the professor of "Catholic" philosophy, to the theological faculty would seem to be proper, and would guard against the error of supposing that there could be such a thing as a "Catholic science." There is a science of Catholicism, namely, Catholic theology, but there is no "Catholic science." Moreover, a Catholic priest, if called to this professorship, as was the case recently at Breslau, would probably feel more at home in the theological faculty; he is certainly an anomaly in the philosophical faculty, and the distrustful attitude of this faculty appears to be well founded. Such a transfer would, however, also make the chair of philosophy formally dependent upon the bishop; nevertheless, better a frank than a disguised dependence.

A similar consideration subsequently led to the same kind of dual professorship in the chair of history. There can be no doubt that the environment in which a man is born and reared exercises a considerable influence upon his conception of history. At least the historical movements and forms of life connected with the great conflict between Protestantism and Catholicism are almost necessarily viewed in a different light by a born Protestant and by a born Catholic, even an independ-

ent and free-thinking Catholic. This gives the Catholic population a kind of quasi-natural right to the opportunity to study history, at least at the universities of the preponderatingly Catholic provinces, under a man who, by birth and education, belongs to the Catholic system.

I cannot avoid the force of these arguments and cannot, therefore, join in the indignation with which the proposal to establish a chair of history for a Catholic at Strassburg has been received by many university instructors. I cannot recognize in it an attack upon the freedom of science. It is merely the recognition of a fact, the fact, namely, that history, viewed from divers standpoints, shows different aspects.

But scientific research, it is said, should seek the truth without any presuppositions. Assuredly it should; it must not allow any dogma or prejudice to confuse its recognition of facts. But what is to prevent the Catholic from acting in this spirit? There is no canonical exposition of history; the Catholic as well as the Protestant professor of history receives his chair from the government, without previous consultation with the bishop; there is no such thing as a *missio canonica* for the teaching of history. And neither the Catholic nor the Protestant will find in his commission any obligation to teach history according to the shibboleth of any party, or to secure the approbation of the ultramontane press or even of the Bishop of Strassburg. And one may be allowed to add: in every case the history taught by a university professor appointed by the government will be somewhat less biased and less offensive from a confessional standpoint than that which would be taught where the Catholic viewpoint was looked upon as the all-important one.

It is a different question, whether the establishment of this chair was, at the time, a wise political move. It might be said that, so long as the relations between the government and the Roman church are so strained, so long as the Curia is opposed to the establishment of a Catholic theological faculty in Alsace, or imposes conditions which it knows to be unacceptable to the government, there is no occasion to satisfy the wishes of the Catholic party. The government could have awaited the development of events, and then, when the faculty, desired in the interests of confessional peace and national progress, had

been conceded, it could, for its part, have made concessions in the establishment of the other professorships.

I shall close this discussion with a remark or two concerning the idea of a purely Catholic university. The same reasons which compel me to argue for Catholic theological faculties at the universities, compel me to oppose a purely Catholic university as undesirable. The demand has been made that the Academy at Münster be developed into a university at which only Catholic teachers shall be employed, because, it is pointed out, there are Protestant universities (Halle-Wittenberg, Rostock) which were founded as such. It seems to me that would be a reversion to the old confessional and territorial principle to which the Prussian government could never give its consent. If any demands are justified upon the ground of the parity of creeds, they must be met by abolishing whatever few survivals of the Protestant confessional university may still remain.

Even less can the suggestion to erect a "free" Catholic university, like the so-called "free" universities of France, Italy, and Belgium, by private means but under ecclesiastical control, hope to meet the approval of those who desire a truce with Catholicism, though not its domination, in Germany. The chances are that, owing to a lack of means and the uncertainty of its existence, such an institution will never be established in Germany. But if one should be established upon a large scale, it would not only be compelled to play into the hands of those who demand a segregation of the Catholic students, but it would also have to use its influence for the suppression of already existing Catholic faculties. As a matter of fact, the idea of such a "free" Catholic university had its origin among those who are opposed to the "government faculties." A "free" Catholic university could be nothing but a school of ultramontaniam in Germany. It is self-evident that such a thing would not be desirable either for the peaceful development of our people or for the education of the individual. Certainly not for the latter. A university entirely enveloped in the atmosphere of ultramontaniam would assuredly not be a good educational institute; it would necessarily produce a fatal narrowness of mind toward reality and truth in those who committed themselves entirely to its influence. Nor for society as a whole: such

a complete separation would lead to a fatal increase of hatred and contempt among the educated classes of our people. Moreover, the progress of the French *facultés libres* does not seem to be very encouraging; in spite of all the ecclesiastical encouragement which they have received, they have, both in importance and number of students, fallen far short of what was expected of them at their establishment; they have a total of little more than a thousand students, as against thirty thousand for the state institutions.

3. *Denominational Representation at the Universities*: I shall add just a word here concerning some striking peculiarities of the case. Two things, in general, attract attention: the Catholic population falls far short of its percentage, while the Jewish greatly exceeds it. Conrad (cf. Lexis, p. 144) gives the following figures for Prussia in 1888-1890:

	Evangelical	Catholic	Jewish
Population	64.24	34.15	1.28
Higher Schools	72.11	17.5	9.7
Universities	72.13	18.62	8.94

It appears that the Catholic population is almost fifty per cent. below the average, while the Jewish is almost seven times above it.

A careful investigation in Baden,¹ gives the following figures, which also reveal the fluctuations during a considerable period of time. For every million inhabitants the number of students at the three universities in Baden was as follows:

Years	Evangelical *	Catholic	Jewish
1869-73	898	510	962
1874-78	882	479	1269
1879-83	784	455	2444
1884-88	1131	779	3553
1889-93	1334	952	3593

¹ L. Cron, *Glaubensbekenntnis und höheres Studium* (from the archives of the universities of Heidelberg and Freiburg and the School of Technology at Karlsruhe, 1869-1893), Heidelberg, 1900.

The conspicuous feature in these figures is the rapid increase of the Jewish element; since the founding of the new German Empire this element of the population has quadrupled its attendance, the Catholics, who were far behind, have almost doubled theirs, and the Evangelicals have increased theirs by one-half.

Let us inquire into the cause of these conditions, especially the low average of the Catholics. That it is not due to governmental discrimination against them, as the occasional complaints about lack of equality by the Centre might lead us to believe, is somewhat conclusively shown by the fact that a state like Bavaria, with a strong Catholic majority, reveals essentially the same conditions.¹ The real cause is to be sought, rather, in a combination of industrial, social, intellectual, and national conditions. The following points must be noticed:

1. Throughout Germany the Catholics are not as numerous as the Evangelicals among the educated, well-to-do urban middle class, which furnishes the largest contingent of students, but they predominate among the class of small farmers and day laborers. This is due to the fact that the Reformation was universally first espoused in the towns, especially in the free towns. And the fact has also been pointed out, with reason, that the evangelical parsonage has made very considerable contributions to the increase of this educated middle class, while the Catholic clergy have for centuries drawn upon the energies of this class without making any returns. In the statistics of Baden these conditions are revealed by the fact that the farming and artisan class, and even the inferior servants, supply a disproportionately large part of the Catholic student contingent: 1242 students out of 3156 came from this class, among the Evangelicals only 493 out of 2728; but among the Evangelicals, merchants, clergymen and teachers formed a considerable contingent. For Prussia the additional fact must be considered that the Poles of the eastern portion, who, for various reasons, take but a scant interest in education, belong to the Catholic portion of the population.

¹ I add the figures at hand for the attendance at the higher schools: in 1890, in Prussia, there was 1 pupil in higher institutions for 198 evangelical, 366 Catholic, and 30 Jewish inhabitants; in Bavaria, 1 for 150 evangelical, 236 Catholic, and 27 Jewish inhabitants.

2. Appreciation of science and scientific culture, especially as a factor in industrial and social life, is less keen among Catholics than among Protestants. The former still regard an education as primarily a preparation for a clerical career, an idea due, in part, to the already described social condition of the Catholic population, but also to the ecclesiastical-intellectual atmosphere in which it lives. This intellectual bias can be recognized in the subjects selected by the students. In Baden statistics reveal the following conditions at the two universities:

Students of	Evangelical	Catholic
Theology	17.7	31.0
Jurisprudence	27.3	27.2
Medicine	18.6	15.8
Philosophy	17.2	14.0
Mathematics and Natural Science	9.4	4.1
Economics	6.3	4.5
Pharmacy	3.4	3.4
	100.0	100.0

The conspicuous features of this table are the large number of students of theology and the small number of students of the natural sciences among the Catholics; a condition which corresponds to the figures at the technological university, where there are 715 Catholics to 955 Protestants, 22.6 to 35.0 p. c. respectively of the whole number.

In Prussia the figures are: for each 100 Catholic students there are 37.8 theologians, 17.5 jurists, 24.6 doctors, 20.1 philosophers; among Evangelicals, 26 theologians, 21.2 jurists, 25.3 doctors, and 27.5 philosophers.

Nor is the Catholic population represented in proportion to its numbers among the university instructors. A recent thorough and intelligent investigation has revealed the existing conditions in this respect at the Prussian universities.¹ For each million of the male population of each denomination there were respectively 35 Catholic docents of all grades, 106.8 evangelical, and 698.9 Jewish; and 16.9 Catholic ordinary pro-

¹ W. Lassen, *Der Anteil der Katholiken am akademischen Lehramt in Preussen*, Cologne, 1901.

fessors, 33.5 evangelical, and 65.5 Jewish. The author justly points out that in former times the small representation of Catholics may have been due to the fact that four of the six Prussian universities were practically closed to them; but with equal justice, he also blames the Catholic population itself for the continuance of this condition of things; since 1866 their neglect can hardly be attributed to confessional reasons; the conditions are now most favorable for the promotion of Catholic docents to professorships. But the inclination to enter upon an academic career is, he says, weaker among the Catholics, for their proportion of private docents is shown by the statistics to be still less than their proportion of professors.

The causes for the strong preponderance of Jews at the universities lie upon the surface: they are practically without exception residents of the cities and more than ordinarily well-to-do. To this must be added their strong desire to improve their social position, and for this a course at the university is the best or rather the only means, a military career being closed against them. Nor must it be forgotten that, in addition to intellectual ability, the Jewish people are gifted with great tenacity of purpose, coupled with a capacity for self-sacrifice, to secure a desired end. Thus it happens that they send a disproportionately large contingent to the higher schools and universities in spite of the fact that later in the learned professions, especially in official careers, they meet with great and in part insurmountable obstacles. The consequence is that, denied a career in other directions, they crowd into the professions that are open to them, such as medicine and law, as well as the academic, as is evident from the figures supplied by Lassen.

That we are here face to face with a real and difficult problem cannot be denied even by one who does not look at the facts from an anti-Semitic standpoint. If the learned professions, like the other industrial callings, should be turned over unreservedly to free competition, it seems that they would be gradually monopolized or at least largely filled by the Jewish population, superior by reason of wealth, energy, and tenacity. That no European people would endure such a state of things, that it would look upon it as an alien yoke and do away with it by force,

cannot be doubted. Hence everybody, even the Jew, is interested in preventing it. It cannot, therefore, be taken amiss if some effort is made to counteract this Jewish superiority in the learned professions, at least wherever they partake of an official character, even though this may be a burden upon an individual here and there.

BOOK III

UNIVERSITY TEACHERS AND UNIVERSITY INSTRUCTION

CHAPTER I

UNIVERSITY TEACHERS

1. *Function.* According to the German view the university professor has a double function to perform: he is both a *scholar* or scientific investigator and a *teacher of knowledge*. As has already been pointed out in the introduction the peculiar character of the German university depends upon this union of the two functions; the university is both an *academy* and a *higher institution of learning* (*Hochschule*) if we mean by academy an institution having as its object the extension of scientific knowledge and the organization of scientific labor.

It would accordingly be the ideal of the university teacher, on the one hand, to be an original thinker and a productive investigator within his particular field, and, on the other, to inculcate into the minds of his pupils the scientific spirit and to teach the most gifted ones among them to take part in the work.

Two things are needed in order that these aims may be realized: the teacher must have *learning*, he must possess extensive scientific knowledge and understand the methods employed in his field, and he must have an *original mind*, the power to see things from an independent point of view and to handle them in an original way. The complete possession of these two qualities characterizes the ideal university teacher. We must assume still another element, in accordance with Cato's saying: *orator est vir bonus dicendi peritus*: the university teacher must be a good man, a man capable of planting in the souls of his pupils great and noble thoughts, above all a strong love of truth, a proud independence of spirit, and a noble modesty manifesting itself in freedom from arrogance and vanity.

Academic circles are at present governed in their estimate of a man primarily by his scientific productivity; his ability to teach

is a secondary consideration, or rather, it is looked upon as an accident of the former quality. The university has a tendency to regard itself primarily as a scientific institution; the function of teaching is not apt to be emphasized. Our historical survey has shown us that this was not originally the case. The universities were originally "higher schools," and retained this characteristic during the eighteenth century. Even a man like Melancthon, the *praeceptor Germaniae*, in a letter to his friend Camerarius, also a distinguished university professor, speaks of the lowliness of the *vita scholastica* in which they had spent their entire days. And Michaelis of Göttingen expresses the same opinion with respect to the function of the university professor, declaring it to be his duty to give instruction and not to increase the stock of knowledge already acquired. Not until the nineteenth century was the demand for original work in science realized, the ideal that he alone is a fit teacher in a particular field of science who is a productive worker in that field. In accordance with this view the business of university instruction is not the mere handing down of knowledge, but stimulation to independent research.

It was the age of the greatest intellectual productivity ever experienced by the German people, the age of Kant and Goethe, that had the courage to rise to this high plane. Fichte and Schleiermacher were the first to give emphatic expression to the new conception in the memorials prepared by them at the founding of the University of Berlin. Whoever desires to enter the learned professions, the *clerus* of the nation, they declared, whoever aims to be more than a mere handicraftsman in his office, must be required not merely to know what has already been discovered, but must be capable of enriching the body of knowledge himself. Indeed, true knowledge cannot be acquired by mere learning by rote, but must be produced anew by each seeker after it.

The university these philosophers regarded as the institution in which, through the association of the older with the younger generation, this process of creating knowledge constantly takes place; and they therefore demanded that the university teacher be creative or at least a productive worker in his field.

Under the influence of these thoughts the German univer-

sities have become, in the nineteenth century, what they now are, the workshops and nurseries of the intellectual life of our people.

Nowhere is the demand which the German university makes upon its teachers more clearly emphasized than in the requirements for entrance into the teaching body, in the bestowal by the faculties, of the *venia legendi*. Scientific productiveness is so sharply emphasized among the conditions of admission that it overshadows all the rest. In the requirements which the candidate has to meet stress is laid not upon the extent of his knowledge and his readiness to impart it, not upon the elegance of his diction, not upon the formal aspects of his lecture, but upon the scientific content of the work presented by him, upon the evidence it shows of his capacity for original scientific research. It is true, the candidate has to deliver two lectures, one before the faculty, which is followed by the so-called *colloquium*, and a public lecture, but compared with the specimens of scientific work presented by him, these seem to be merely secondary, and are tending to become so more and more. The conviction is hereby expressed that whoever can prove his capacity for original research in a particular line shows himself to be in possession of the essential qualifications of the university scholar. A wide knowledge of the subject (for the possession of which the doctor's degree already offers some guarantee) will, it is supposed, come with the need of working over the whole field of a science in the lecture course; and the ability to teach will presumably not be lacking in a man who is capable of producing knowledge independently.

The German type of university becomes clearly defined when we contrast our requirements for "habilitation" with the conditions governing the so-called *agrégation* in France, a form which, at least in the law faculty, somewhat corresponds to our habilitation. The following information is taken from the exhaustive account given by L. Savigny in his *Französische Rechtsfakultäten* (pp. 108 ff). Candidates desiring to be accepted as *agrégés*, assistant teachers who are appointed by the minister in the faculties of law, and from whose ranks the vacant professorships are filled, must first pass a competitive examination. This is held in Paris by a commission composed of law professors and officials. The examination consists of a preliminary examination and the main

examination; the former decides the candidate's fitness to be admitted to the latter. No more than three times as many candidates can be admitted to the final examination as there are *agrégés* to be appointed in the faculties. In the preliminary examination the requirements are as follows: 1. The candidate must pass two written examinations, giving seven hours to each, one on some subject in Roman law, the other on some subject which shall be left to his choice; 2, he shall deliver a lecture, lasting three-quarters of an hour, on some topic of the French civil law, for which he will be allowed twenty-four hours of preparation, and shall spend a half-hour in interpreting texts in Roman law, for which he will be given four hours for preparation. The final examination intended for the smaller group of "*admissibles*" who have passed the preliminary, consists of: 1, a written examination on a subject taken from the "general theories of legislation" and for the preparation of which seven hours are allowed; 2, a lecture, lasting three-quarters of an hour, on some question of the French civil law; 3, a lecture, lasting three-quarters of an hour, on a subject in some field chosen by the candidate, for the preparation of which twenty-four hours are given. The winners in this competitive examination are then appointed *agrégés* and are advanced, according to term of service, to the vacant full professorships in four or five years.

It is plain, the emphasis is here laid on the extent of the candidate's knowledge and the readiness with which he can impart it, on his ability to apply it rapidly in the solution of the problems placed before him. The gift of eloquence is a quality of especial importance in these examinations: "by an instinct which can usually be depended on in such things the examiner gives the *leçons* a decided preference over the *compositions*, of which indeed it is generally believed that they are not read at all." Applicants may offer scientific works in addition, but these are not looked upon as having great weight. The result is that a person having the capacity for original research is outstripped by one who assimilates knowledge easily, has a good memory, and possesses a ready skill in expressing himself. A further consequence is that the students pay particular attention to these things and that the inclination to do original work receives too little encouragement. And the future career of the successful

candidate shows the same traits. The fact that the *agrégé* is considered capable of teaching any subject in his faculty and is called upon by the minister to fill any position in it according to the demands of the service, as well as the fact that he is promoted to any vacant professorship, according to his term of service, all this shows that emphasis is laid on encyclopedic culture rather than on research. The possession of certain knowledge in all branches, presence of mind, and a ready ability to apply such knowledge, these are the things that determine a man's success.¹

These things have their value, to be sure. But it is also true that they are the qualifications of the practical man, of the attorney, the orator, the judge, rather than of the scholar. We are perhaps inclined to underestimate them, perhaps we lay too much stress upon productive scholarship in the university teacher, and we may perhaps at times regard the mere products of scholarly industry as signs of productiveness. Nevertheless we cannot abandon our principle that the university teacher ought to be a man of scientific achievement; that is our first demand. The fruits of his labors may not prove very satisfactory here and there, nor very palatable, but the demand exercises a universal influence. It develops thoroughness and concentration, it makes the investigator conscientious and persistent even in the solution of a rather modest problem which may seem to be or really may be an insignificant piece of work, but which may have to be solved none the less; it encourages him, on the other hand, to enter upon new and uncertain paths, an important element for the progress of knowledge, for without the daring courage of the discoverer who does not shrink from the road that leads into the unknown, many a discovery would be lost to science. Indeed, how can we ever predict with certainty, at the outset, the ultimate value of a scientific investigation?

In this connection let me also call attention to a phenomenon peculiar to the German universities: the scientific schools. The university teacher is also an investigator, he encourages his

¹ Concerning the similarly organized *agrégation* in the *facultés des lettres* and *des sciences* and its effects, see Ferd. Lot, *L'enseignement supérieur en France ce qu'il est et ce qu'il devrait être*, 1892, p. 30.

pupils to participate in his labors, and thus trains them to continue his work. In this way the continuity of scientific work, one of the great conditions of its fruitfulness, is preserved. At the same time a spirit of rivalry is aroused within the school, the teacher himself is greatly stimulated by active contact with his sympathetic and ambitious young co-workers, and through association with these his work receives an added value.¹

Thus it has come to pass that the universities and not the academies of science have become the centers of scientific work in Germany. The Academy is a gathering place of experts who have not much to tell each other; each man works for himself, and the personal communication of results in the meetings is often nothing more than a useless formality, yes, perhaps even more or less of a burden; while in the university master and pupil come into living, active relations with each other. It is doubtful whether any one in Germany would consider it necessary to establish such academies as separate institutions, supplied with all the equipment with which the show-loving eighteenth century fitted them out. What they now accomplish, particularly in the organization of larger scientific enterprises, could easily be done in the more modest form of learned societies which might be formed as permanent committees at the universities, and which might be authorized to admit efficient members from other circles.

I shall let a foreigner speak of the effect of this tendency of our university system upon science itself. In the book mentioned above Ferdinand Lot compares the French with the German universities on this point, and draws the following conclusions: "The intellectual supremacy of Germany, in all fields, without exception, is at present recognized by all nations. It is

¹ In his readable *Excursions pédagogiques*, 1882, M. Bréal emphasizes the fact that personal pupils are a phenomenon peculiar to Germany. "In France one is not apt to be the pupil of a man, one is the pupil of the *école normale*, the *école des chartes*, the *école polytechnique*. These abstract and collective teachers are unknown to our neighbors; in Germany one is a pupil of Boeckh, of G. Hermann, of Ritschl, of Haupt." He thinks that this is, on the one hand, the result of the free choice of the teacher and of the subject, it leads to the independent association of investigators; on the other, of the conception of the function of the academic office in Germany: it is the pride of the teacher to found a school.

an established fact that Germany alone produces more than the rest of the world together; its supremacy in science is a counterpart to the supremacy of England in commerce and on the seas. Perhaps it is relatively still greater." Thus our author. I should not dare to make such a statement; it will have to be discounted to some extent, or perhaps considerably. But one fact is beyond dispute. The position which Germany occupies in the scientific world to-day, it owes in the main to its universities, and these owe what they are and what they accomplish to the principle on which the universities are based: they are scientific institutions, their teachers are at the same time or primarily scientific investigators. The French faculties are or were, first of all, state schools; they were such by public regulation, by the state examinations, the official curriculums, and the competitive tests. Hence their achievements are less fruitful for the scientific life of the people.

I add another fact. Not only the universities, but also the student bodies and the learned professions have been raised to a higher plane of intellectual life. Though only a limited number of students succeed in doing original scientific work, yet the majority have at some time or other been seized with the impulse to seek after the truth. This longing remains in the souls of many, they become permanently interested in science and scientific life. Even in their callings they regard themselves as parts of the academic world; the teacher in the gymnasium, the clergyman, the physician, the judge, all seek to keep in touch with science, and not a few succeed not merely in following the standard of science as sympathizers and sharers in its glories, but also in serving under it, here and there, as active co-workers. The multitude of scientific societies and the enormous number of periodicals give evidence of the wide diffusion of scientific interest in German lands. Everywhere the university forms the center of this life; think of what a small university like Kiel has meant and still means for Schleswig-Holstein, or Tübingen for Würtemberg, or Jena for Thuringia. Beyond doubt even the professions themselves have in this way enhanced their reputation and dignity in the eyes of the population. The respect for science which is deeply implanted in the German people invests the members of the learned professions themselves

with an authority which could not be conferred upon them by the power of the state alone. They are not mere functionaries of the government, but are at the same time endowed with a kind of inner authority by their presupposed possession of scientific knowledge.

Still another point. The triumph of the conception that the university is a scientific institution has, on the whole, given our academic youths a nobler and more independent bearing. The brutality and vulgarity which had come down from the seventeenth century to the eighteenth, and which again and again made their appearance during the latter century—we have only to read the descriptions of student life at Jena and Halle dating from this period—have not, it is true, been wholly suppressed, but they are no longer as prominent as they were and they no longer dare to parade as the legitimate forms of student life. The so-called “pennalism,” and everything connected with it, accorded with the conception of the university as a school; it represented the swaggering opposition to all binding rules which young men who have outgrown the discipline of the school-room are fond of exhibiting. Young men who are not drilled for examinations, but serve science, who come into daily personal relation with the leaders of their science, do not feel the need of demonstrating their academic freedom by insults against law and order. I am well aware that the reality has not kept step with the ideal in this regard, and yet I maintain that the academic life of the nineteenth century has undergone a great change, a change from the puerile to the manly.

We are therefore justified in saying that the German university has cause to look with satisfaction upon the century which has just closed. The principle that the scholars and investigators of the nation shall also be the teachers of the youth has triumphed. No one reviewing the century can doubt the fact that the strongest and most lasting influences in university instruction have invariably proceeded from those who held the leadership in the scientific world. We might mention a large number of celebrated names in all the different faculties (just run over the surveys of the particular subjects in the work entitled *The German Universities*), all of which testify to the truth of the proposition that scientific eminence and the ability

to teach 'go hand in hand. And this fact points to a deeper relation between these things: the desire to know and the desire to teach spring from the same root.

Für andre wächst in mir das edle Gut,
 Ich kann und will das Pfund nicht mehr vergraben.
 Warum sucht ich den Weg so sehnsuchtsvoll,
 Wenn ich ihn nicht den Brüdern zeigen soll?

2. *The Difficulties.* Like all other institutions the German university system has its weaknesses and dangers. Let me point out a few.

1. Certain dangers arise from the union of *instruction* with scientific research. They are manifested in both teacher and student.

In the teacher. Since the university professor regards himself, primarily, not as a teacher, but as a man of science, his scientific work is apt to seem more important and dignified to him than the business of instruction. Thus it may happen that he cares less than he ought for the development of his power to teach; that he does not take the business of instruction seriously enough, and cannot prevail upon himself to give the proper time to the preparation of his lectures and exercises; yes it may even happen that he regards his teaching as a burden, as a task that interferes with his true vocation and which he feels himself justified in performing as best he may. We have all heard the humorous saying: The semester is an inconvenient interruption of the vacation, of the period of scientific leisure. Whoever shares this feeling will not, of course, fully appreciate the responsibility resting upon the teacher; he will lecture because it is his business to lecture, he will read off his notes or talk like a book, like a book not caring whether the hearer can or is willing to follow him. And when he meets with poor success, when his attendance decreases, and his students finally stay away altogether, he consoles himself by throwing the blame upon them: they are too dull to feel a yearning for true science. And at last he comes to look upon his lack of success in teaching as a sign of his superiority; whatever is truly valuable is always a matter for the few, to attract large numbers brings the blush

to the cheek of the true scholar. As the bee sucks honey from all kinds of flowers, so self-love and vanity succeed in extracting praise from occurrences of every sort.

This evil might perhaps be avoided as follows. Positions might be created for genuine scholars, who, however, possess neither the inclination nor the ability to teach, in which they could devote themselves entirely to research without being in any wise hampered by the duty to teach. In this sense the recent creation by the Berlin Academy of Sciences of a number of positions for "scientific officials" may be welcomed as a sign of progress, even from the standpoint of the universities. Hitherto there have been no assured positions for men feeling a call to scientific work, except university professorships. Such men, therefore, sought these places even when they felt neither the inclination nor the ability to fill them. And inasmuch as a man's admission to the university career and his promotion depended upon his capacity for original research, the professorships were frequently filled by persons wholly lacking in the ability to teach. It will be a gain both to the universities and these pure scholars if they are no longer burdened with each other.

The union of investigation and instruction also contains a danger for the students. It not infrequently happens that the student begins to "specialize" too early in his career. It will not be necessary for me to protest against the charge that I do not regard the introduction of the student into scientific work as the essential, nay as the highest, function of university instruction. But all study begins with learning. And this task of learning is rendered much more difficult than formerly. Scientific research necessarily leads to greater and greater specialization of labor. The consequence is a constant increase in number of professorships and a corresponding contraction of the field of study. Instead of the one old *professor physices* we now have eight or ten professors for each of the different branches of natural science. The same development has taken place in the field of history and the historical sciences. The result is that, instead of first obtaining a general survey of his field, which is particularly essential to him, the student is at once carried off into a lot of special investigations and buried under a

mass of details and problems. The teachers discuss not so much what the student needs as what they themselves are pursuing as investigators. And hence it not infrequently happens that students who do not get what they want and seek lose heart entirely. Others immediately plunge into some special investigation or other. This is a danger to which the most zealous and most competent among them are particularly exposed. Captivated by an eminent teacher, or perhaps monopolized by an instructor anxious to establish a school, they fail to obtain an impartial view of science as a whole, or to widen their horizon by studies of a general character. Instead, they at once attack some special problem and are thus enticed to play the scholar even before they have really begun to learn. This happens particularly in the philosophical faculty; the student delves into some specialty or other in the hope of striking a vein of gold. In this way his general education is neglected, and when at last the student is confronted with the teacher's examination and its requirements, he feels hurt because the affair does not pass off smoothly, after having done the very things which his professor induced him to do. And when he eventually enters upon his duties as a teacher, he feels out of place; he can use as good as nothing of what he has learned at the university; and that which is required of him in his position was not held in high esteem at the university. As a scholar our hero considers himself too high-toned to do the work of a teacher of elementary subjects, and yet the work has to be done. It often takes a long time before a person again gets his balance in these cases.

2. Its connection with the university system also exposes scientific activity to certain dangers. Let me point out two of these.

The first is a kind of pseudo-productivity. Scientific production is the precondition and therefore becomes a means of obtaining a position in the university world. In this way the younger man in particular is forced to produce hastily and prematurely; there is no time for his work to mature; he makes haste to finish something in order that he may be on hand as an applicant for some vacancy. And many a man entertains the view, which indeed does not seem to be wholly unfounded, that not only the quality, but the quantity of the work produced is the determining

factor in the struggle for place; it is so much easier to measure the quantity than the quality.

Another danger is that the competition for place also influences scientific work. The anger of the defeated candidates, the resentment felt against the favored ones, the envy of those who have succeeded, the distrust of the influential, all these feelings pass from the university sphere into the scientific literature and give the controversies and polemical discussions the venomous character which they so often reveal in Germany. Literary partisanship counts for something also in this connection. Writers attempt to gain the good-will of a powerful man by praising his works or dealing gently with his opinions, or with still greater success by industriously attacking his opponents. The unpleasing state of scientific criticism in Germany is connected with all this; only too often does it show a lack of pride and dignity; sometimes it is partial, insinuating, flattering, then again it is arrogant and scornful, maliciously intent upon running down and defaming the book and its author; the few accidental mistakes discovered by the critic seem to be the only notable thing about a book. In case a work meets with success, it is invariably defamed. Goethe once classified his opponents as follows (in *Eckermann*, April 24, 1824): Besides the class of the envious there is still another class, those who oppose "on account of their own want of success."

While I am dealing with this side of human nature, let me add a remark concerning certain weaknesses which might be characterized as the professional vices of the university professor. Like all professional diseases they grow out of his professional activity and often represent the reverse of professional virtues. As the reverse of independence of thought, the courage to doubt and to enter upon new lines of thought, which may be designated as the chief virtue of the investigator, we have the tendency to cavil or find fault; a professor, according to the well-known humorous definition, is a man who differs from you. Connected with this tendency to differ from you is stubborn opinionativeness; of course, a man who knows everything better than you demands that others listen to him and agree with him. Indeed, professors who can and love to talk and teach are common enough, but a professor who can listen is rare. Bismarck

once said that it was impossible to find a man in Germany who could not set you right in all matters, from politics to catching fleas. Was he perhaps thinking of his conferences with university professors? In case this opinionativeness is accompanied by an absence of healthy common sense, which is not infrequent among scholars, it becomes sheer pig-headedness.

Related to this stubbornness of opinion is *arrogance*, a plant that grows on every soil, always assuming the color of the soil. In the university world the great Duns, to use an old expression, or "*das grosse Tier*," as students now call him, is a common phenomenon. He assumes an attitude of superiority, he speaks in the tones of a man whose deliverances settle the matter; to contradict him or express doubts is resented as impertinent. This attitude often goes with specialism; the specialist knows that there is no one superior to him in his own field and cheerfully disregards what he is ignorant of. Kant somewhere speaks of the "Cyclops of science" who carry an enormous load of learning, the "burden of a hundred camels," but possess only one eye, that is, their specialty, lacking the philosophical eye. He seems to have met these persons particularly among the philologists; "Cyclops of literature" he calls them. As a matter of fact, even the nineteenth century has produced perfect and truly exemplary copies of this type. But they are to be found everywhere, among the jurists and the medical men as well as among theologians and philosophers. Only think—not to go outside of the philosophers—of the exaggerated feeling of superiority with which the speculative philosophers looked down upon other mortals who could merely employ their understanding in solving problems. Or think of Schopenhauer who, if he got nothing else at the university, at least carried with him into his retirement a fair share of genuine Hegelian arrogance and bequeathed it to numberless successors outside of "the guild" of philosophy. In place of the halo of the professor, self-love here surrounds the thinker's brow with something of the lustre of the martyr's crown; a witness of the truth, of course, is not fit to be a professor of philosophy. Thus the scattered seeds of academic pride spring up even outside of their enclosures.

By the side of pride—to enrich this anthology with another species—*vanity* also blossoms out. This is a plant which grows

on the soil of publicity. The university, as well as the stage produces fine specimens of this type. Its description I leave to a man who made his observations a hundred years ago. Meiners, of Göttingen, writes, without always preserving, it is true, the tranquillity of the wise man or of the Spinozistic natural-historian of the emotions: "I must confess that the most shameful examples of pride and foolish vanity, the good natured as well as the repulsive kind, ever observed by me, I have found among academic scholars. It would be a blessing if scholars were vain merely of their learning and their achievements. They are often just as proud of the favor of the powerful, especially of the ladies, of wealth and titles, of their good table and fine wines, in short of everything of which uncultured and narrow-minded people are proud." And he goes on to moralize: "It is hardly more than natural that among a class of men where pride and vanity predominate, *envy* and *jealousy* should also be common faults. These vices manifest themselves among scholars as often in a ridiculous as in a malicious way. Just note the effect produced when one of them receives an advance in salary or a higher title. . . . The same thing takes place when a young man receives an unusual share of applause. How often it happens that men who are without controversy reckoned among the leaders in their field and are themselves convinced of this fact, endeavor to destroy even their most insignificant rivals. The most ardent lover cannot be more jealous of his mistress than many scholars are of fame and applause in their line."¹

I have nothing to add to these statements except to say that this is evidently a professional failing. Though the business of instruction is not a haughty thing as such, yet there is something alluring in lecturing from a university pulpit. The teacher in the schoolroom comes into constant contact with the actual world, the lecturer in the professor's chair is not so apt to meet with the resistances of everyday life. The professor delivers his lecture, makes his exit amid the

¹ Meiners, *Verfassung und Verwaltung der deutschen Universitäten*, vol. ii., p. 16. Whoever delights in slanders will not pass by a book by J. Flach, *Der deutsche Professor der Gegenwart*, 1886; otherwise it is neither an instructive nor a refreshing book, not even witty.

shuffling of feet," which has come to be the customary form of applause, and is convinced of having enlightened and convinced the entire audience. No wonder that under these circumstances the habit of mind develops which Mephistopheles, clad in Faust's professional garb, becoming indignant, so magnificently satirizes: How convinced we are of knowing it all! And still another thing may be mentioned in extenuation: the loving attention which the university scholar receives from the press. From the day when he enters upon his career, he is treated as an important public personality; at every new stage of his progress the public is reminded of him. Every time he is called to another institution the news is telegraphed to all the newspapers in the German Empire, for weeks the German people are kept in suspense as to whether he will accept the call or whether it will be possible to keep him at the university which he has adorned with his scholarship and which is now in danger of losing him. Finally comes the period of jubilees, and on every occasion he again appears under the calcium light on the stage, and is celebrated by the press, by his pupils and colleagues as an incomparable ornament of science. Indeed, extraordinary powers of resistance are needed to endure all this without having one's head turned somewhat.

Enough, enough of these human, all too human traits. Or would it have been better not to speak of them at all? No, I think it was necessary to speak of them. Not in order to bring the university professors into contempt—they get enough of that already, along with much foolish glorification—nor yet in the hope of exterminating these vices by giving a faithful description of them or by preaching eloquent moral sermons against them. They will continue to flourish as long as human nature and conditions remain what they are. But I felt it to be only right that in a work in which so many good and commendable features of the German universities are dwelt upon, some of the things that are not so good and commendable, should be candidly mentioned. Besides, I was not willing to leave the description of the reverse of the picture entirely to the ill-disposed; by inserting it into its proper place in the system it seemed possible to reduce it to its true proportions.

3. *The System of Private Dcents.* As has already been

shown (p.103) the teaching staff of the German university consists of two groups whose legal status is entirely distinct, *professors*, in ordinary and extraordinary, and *private docents*. We have said all that is necessary on the legal side; here I should like to add a few statements concerning the significance of the system, and particularly concerning its value for the individual and the university.

As a rule the private-docentship is now regarded as a prelude to the professorship. The teacher usually passes through three stages. He enters the academic career as a private docent; after a shorter or longer period of years he is promoted to an extraordinary professorship in case he has distinguished himself by his scientific work and proved his ability as a teacher, and finally reaches the last stage in the full professorship. It is true, there are so many exceptions to this line of advance that we can hardly speak of a rule. Not only is the second stage, the extraordinary professorship, frequently passed over, but it also not infrequently happens that men in other avocations who have made a reputation for themselves through their scientific productions, are called to a professorship without having first habilitated themselves as private docents. This occurs particularly in the theological and philosophical faculties, the former being often recruited from the clergy, the latter from the secondary schools. But these occurrences seem to be becoming rarer, particularly the passage from the school to a professorship. This is due to the increased demands which are made upon the teacher and which leave little time for scientific work, and is in line with the general tendency towards a sharper separation of the different professions. The change is by no means a desirable one; many distinguished academic teachers have come from the ranks of the teachers in the gymnasium, and the fact that they had experience in teaching and possessed a knowledge of the schools and their needs was also a gain to the university.

Nor is it unusual, on the other hand, for a person to abandon the academic career which he entered as a docent. It not seldom happens that he enters a different calling, takes a position in a library or in a scientific institute, a clerical office or a place in a school. Or his academic career may end with an extraordinary professorship or an honorary professorship. And

it also comes to pass, though rarely, that a man remains a private docent for the rest of his days. In the medical faculty alone that is not unusual; it is due to the fact that the habilitation assumes a somewhat different character in this case; the position often serves as a mere foil to the practice of medicine, which continues to be the chief profession.

Aside from these exceptions, the stages mentioned before form the rule. The result is that two categories of academic teachers exist side by side, an official class and an unofficial class. In addition to the appointed and salaried professors every faculty contains a larger or smaller number of scholars who have no official standing, but who in other respects have equal rank as teachers. This is an arrangement peculiar to the German university and has often been praised by foreigners as the source of its power. I desire to describe the importance of this institution in a few words.

First a general remark. The academic career thus receives the character of a free profession, more so than any other official profession. The individual enters this career not by appointment, election, or through competition, but by an act of choice. Whoever feels the call to do scientific labor and to teach may, as soon as he has convinced a faculty of his qualifications, obey the inner voice and make the trial in the most independent position possible. He assumes no office, no obligation, nor does the university or the state assume any obligations towards him. The private docent occupies the freest, most independent position in the world; he continues to be a private scholar, with the privilege, however, of establishing himself as a teacher of the academic youth, if he chooses. There is no doubt that this is one of the reasons why the position has such great attractions for the most independent and daring spirits; there is no doubt also that in this way men are brought into the academic career whose primary object is not the dignity and the security of office, but the freedom of scientific work and the independence of an academic position. If the career could be entered, as in other countries, by means of a competitive examination and the candidate had to show before a commission, not his capacity for scientific research, but his familiarity with the entire field of a subject, if he had to begin his professional activity in some

faculty by offering a number of courses assigned to him by a minister of education for pay, then many a scholar would renounce the academic career altogether. It would have no attractions for him; the necessity of preparing himself for an examination embracing the entire scope of his subject, the uncertain outcome of a competitive examination, and the dependent position of an *agrégé*, would frighten him off. He would abandon it to persons recommended by the trustworthiness of their encyclopedic knowledge and their ability to adapt themselves to any position, perhaps also by the happy choice of their political views. The German plan encourages those to enter the university career who are convinced of their ability to promote scientific knowledge in some form or other by their work, and it gives them free play after they have formally entered the career, without claiming their services for any tasks not freely chosen by them. Thus the academic career, through the form which it assumes in its earliest stage, receives the most unmistakable impress of a free learned profession.

In this way the system is of fundamental importance to academic life. But it is no less important to the individual himself. Connected with the university in an independent manner, he has an opportunity to test and develop his fitness for his profession. Though his activity as a teacher is, as a rule, rather narrowly circumscribed, it is not wholly fruitless; he has the opportunity of practising the art of academic instruction within a narrow circle, and after all this art, too, must be acquired. Older scholars, who had been directly appointed to professorships, have not always found it easy to strike the right key in their lectures. The younger man gradually grows into the business; blunders which are bound to be made at first, are made before a small audience and are more easily remedied. On the other hand, if the trial results unfavorably, it is still possible to make a change.

From this point of view the system of private docents is also an extremely beneficial arrangement for the university administration. It represents a voluntary period of probation on the part of young scholars and imposes no burdens or obligations upon the university administration. The latter can, according to its needs, at any time draw from the ranks of the

private docents skilled and tried instructors to fill the gaps in the official teaching staff, without being bound by claims of succession. It may without injury to his legal rights permanently ignore the particular individual and allow him to draw what conclusions he chooses.

For the faculties, however, the institution of private docents means the right to make the first selections for the academic office. By granting the *venia legendi* they confer upon the individual the right to enter the ranks of those from whom the official positions in the instructing staff are primarily recruited. In this way a remnant of the old corporative organization is retained.

Finally, the activity of the private docents also constitutes a not wholly unimportant factor in university instruction. In the first place their lectures and exercises fill many gaps and satisfy many needs that would otherwise remain unsatisfied. Then again the competition and the freedom of choosing one's teacher, which is only made possible by the presence of private docents, have a wholesome effect. As a rule, of course, the official representative of the subject, who is the older and better known man, will gather about him a larger circle of students. He may, besides, be the director of a laboratory or seminar and a university examiner, perhaps also a civil service examiner. Still, nothing will prevent the student, particularly if he does not intend to take his degree at this particular university, from giving the private docent the preference in case he regards the latter's course as more helpful; he is not compelled to take work under a teacher whom he does not like. And hence it is not so rare an occurrence after all for a private docent to gather about him a considerable number of students, especially in the philosophical and medical faculties.

As a rule, this competition between the official and unofficial teachers also represents a competition between the older and younger ones. This is a relation which is both mutually helpful and complementary. Schopenhauer states, in the Preface to, the second edition of *Welt als Wille und Vorstellung*, which appeared twenty-six years after the first, that the two volumes (the second had been added to the first, which dated from the days of his youth) supplemented each other, that the first excelled

in what only the fire of youth and the vigor of a first production could give, while the second surpassed the former in the maturity and consistency of its thoughts, which are the result of a long and industrious life. A similar relation obtains between the youthful private docent and the mature professor. It is not possible to have the same stages of life side by side in the same personality, but here we have them in the two generations of teachers. The older generation excels in maturity of knowledge and approved methods of instruction and investigation, the younger in the youthful courage to blaze out new paths, and in impulsiveness of spirit.

Thus the presence of the two groups of teachers doubtless helps to keep our academic instruction fresh and vigorous and hinders it from falling into the beaten tracks. The younger man must do his best in order to make a place for himself by the side of the older and more noted man. On the other hand, the older man cannot, if he would maintain his reputation, afford to take things easy, as his age and the security of his position might incline him to do. In order to attract the young men he must keep fresh and take part in the active movements of the present. If he were to become intellectually fossilized, or even to rest upon his laurels, he would soon lose touch with the youth and see the circle of his hearers grow smaller and smaller.

At the same time the two groups of academic teachers represent the two tendencies on which science, like all historical life, rests: the conservative tendency and the progressive tendency. The tendency to innovation is represented in the youthful ambitious doctors; the desire is strong in them to promote the cause by new thoughts and discoveries and to make a name for themselves: *plus ultra* is the motto of youth. The other tendency is revealed in men of acknowledged reputation, their motto is *parva tueri*. This tendency is equally necessary. If there were no desire to preserve and strengthen the established truths, there would be a constant whirl of new ideas, and it would be impossible to have that state of stability which is indispensable even to the new conceptions. Only by coming in conflict with the recognized truths can the new thoughts develop and be sifted out. It is certainly not my opinion that professors have

no new ideas or that all private docents are or ought to be the discoverers of new thoughts and systems. Nevertheless the time comes when the past preponderates over the future, and as a rule it so happens that the private docent has not yet reached this period, while the professors have passed it.

In conclusion let me give a few figures showing the composition of the teaching body. A table prepared by Conrad (in Lexis, *Deutsche Universitäten*, pp. 146 f.) gives us the following idea of the status and development of the teaching body in the second half of the nineteenth century, and of the ratio between the number of docents and the number of students. There were in the different faculties ordinary professors, extraordinary and honorary professors, and private docents as follows:

Year	Theology			Law			Medicine			Philosophy		
	o.	e.	p. d.	o.	e.	p. d.	o.	e.	p. d.	o.	e.	p. d.
1840.....	120	31	41	108	32	59	135	66	84	270	124	142
1870.....	130	33	22	126	30	41	166	100	146	383	175	169
1892.....	151	39	28	148	31	43	211	189	238	519	332	346

For each docent there were students:

Year	Theology	Law	Medicine	Philosophy
1840.....	18	16	8	5
1870.....	17	15	7	6
1892.....	23	31	12	6

For each full professor there were students:

Year	Theology	Law	Medicine	Philosophy
1840.....	26	30	17	10
1870.....	23	24	13	7
1892.....	33	47	41	14

Two things strike us in the figures of this table. First, the number of students has grown more rapidly than the number of teachers, the number of students to each teacher being greater

now than fifty years ago. This is especially true of the three higher faculties, most true of the faculties of law and medicine; instead of 30 there are now 47 students for every full professor in law; instead of 17 there are now 41 for every medical professor. Secondly, the number of private docents in the first two faculties is decreasing, absolutely and relatively, in spite of the increase in the number of ordinary professorships, whereas it shows a remarkable increase in the medical and philosophical faculties, in which the number of extraordinary professors is also constantly growing. This is obviously due to the rapid progress in specialization, which makes the establishment of new chairs necessary.

4. *The Personal Relations of University Teachers and Students.* On the whole the relation existing between teachers and students in the German universities may be called a very gratifying one; it is a relation of respect and mutual confidence. Conflicts, such as are not uncommon in the schools and also occur in foreign universities, are at present almost unheard of. The precondition of this happy relation is evidently its entire freedom. Professors and students do not stand in the relation of superiors and inferiors, which is necessarily the case where the professor plays the part of both monitor and examiner; they are, as the common phrase puts it, *commilitones*, fellow-soldiers, joined together to extend the realm of truth, to decrease the realm of ignorance and error. The role of leadership naturally falls to the professors, who are the older ones and have been tried in battle. But the position which they occupy with respect to the students is not that of a superior; the individual student chooses not only his university, but his teachers, and in case he no longer desires to follow them, nothing will prevent him from deserting them whenever he likes and going elsewhere.

It is owing to the perfect freedom of this relation, which, on account of the prevailing custom of changing from university to university, is not seriously restricted even by the fear of the examination, that the German university teacher is entirely relieved of the necessity of combating secret ill-will and open hostility. Disrespectful behavior and disturbances hardly ever occur during lectures and exercises, and whenever they do happen, as, for example, in case of a man coming late to a lec-

ture or misbehaving in any way, the students themselves do police duty. Interference on part of the academic disciplinary authorities in such cases is something wholly unheard of.

Teachers in turn manifest toward students a spirit of confidence and a willingness to be of service. No one who appeals to them for information or advice is apt to have his request denied. Closer personal relations are formed in the practical exercises and seminars; here the foundation is not infrequently laid for permanent scientific coöperation, sometimes also for intimate and lasting friendships. It may be said that unless a person is prevented by modesty or indolence from seeking a closer relation, he will be very apt to find it, provided he proves his worthiness by his earnestness and efficiency. Here again we might call attention to the private docents. They are nearer to the students in age and in all other respects, and not seldom form the center of a small personal circle, especially of older students; they likewise form a connecting link between the professors and students. It is also to be remembered that the academic teachers are fond of attending the meetings and festive gatherings of the entire student body or of particular societies, especially in the smaller universities. Nor is it unusual for them to participate more or less regularly in the meetings of the scientific societies. And it is noteworthy that students always value highly such acts of friendship.

We should therefore have every reason to be satisfied with the existing conditions. Yet we must not hide from ourselves the fact that things are gradually changing in this respect. Professor and student are growing farther apart, particularly in the larger universities. Here the great majority of students never meet the professor outside of the lecture-room; only a small number become personally acquainted with him in the *practica*. This is perhaps least common in the faculty of law, but more common in the theological and philosophical faculties where closer relations continue to obtain. And in the medical faculties the clinics bring the parties together.

Changes in general conditions are responsible for the widening of the breach. First we mention the great increase in the attendance. I remind the reader of the figures given above (page 183). In the faculty of law there were, in 1840, 30

students for every full professor, now there are 47; in the medical faculty there were then 17, now 41, while the ratio has not changed so much in the other two faculties. The custom of studying at different universities, which has grown with the development of the means of transportation, produces similar results; the average length of time spent in residence at one university has decreased to three semesters and less; not a few students, especially jurists, change every semester. And professors too sometimes make such rapid changes, their brief sojourn of a few semesters at an institution reminding one of starring engagements.

But another circumstance seems worthy of consideration. The position of the professor has become more dignified, and the distance between him and the student has correspondingly increased. In the eighteenth century the social standing of the university scholar was still quite modest, the income was usually meagre, the standard of life not far removed from poverty. Think of Kant whose outward mode of living during his later years is well enough known from the very detailed descriptions of his table-companions. It was certainly not below the average, for he was in prosperous circumstances towards the end of his life; and yet how narrow and scant his rooms, his furniture, and his social entertainments would seem to many of our modern professors. Or read the section on the vocation and training of professors in Meiners's work (II. 10 ff). Most of them, he observes, come from poor families and remain in needy circumstances all their lives, so that they can do very little for the social side of their lives. Hence it often happens "that academic teachers are unfitted for any other business than their scientific work, that the most celebrated men behave like children or even like persons from the lowest strata of society in everyday life, that, finally, they resemble inhabitants of another planet in their intercourse with others, especially with the higher classes, and consequently provoke contempt and scorn."

These words, which were written exactly one hundred years ago, affect us like a voice from another world. The impulsive Meiners may have made hasty generalizations and overdrawn the picture, but the direction taken by his thought is characteristic, nobody would write that way to-day. The university pro-

fessor has since risen to a very honored position; he is at home in society, he is not a stranger at court either, and he no longer moves in the company of lords with an apologetic air. A change in his personal bearing corresponds to the change which has taken place in his position; there still exist among the professors scholars who shrink from the world and are ignorant of the world, but they do not constitute the type. There are men in every faculty who feel equal to any occasion in self-assurance and social tact.

Apart from the general changes in the different social strata, the rise of the citizen class and the decline of the nobility in economic and political importance, the great scientific achievements of the preceding generations of professors are doubtless mainly responsible for the position of respect attained by the calling. The greater honor in which the profession has come to be held, has in turn brought into it an increasing number of men from the wealthy and aristocratic classes of society; and marriages between professors and these classes have also become frequent. At the same time the income directly and indirectly dependent upon the office has been augmented, so that some professors now have large incomes, particularly in the great medical and law faculties, occasionally also in the philosophical faculty. The standard of life, again, has kept pace with the income. Every university has at least a few professors who make a great splurge and live in grand style. The state too has done its share; it has become more and more liberal with its titles and distinctions of every sort.

Although this eminent position has been honestly won and in many respects is of great benefit to the university, it nevertheless has the less gratifying secondary effect of increasing the distance between professor and student; and that without any intention on the professor's part, indeed without his knowledge or consent. It is only natural that a man occupying a high position in society, whose income enables him to live in grand style, should not be as close to his students as was the old university professor. He may have remained a simple man at heart, nevertheless his house, his surroundings, are not designed to make a simple student feel at home in them. Imagine the feelings of the professor if he were asked to take students into

his home, as boarders, as many professors did at Halle and Göttingen in the eighteenth century!

In order to understand the full force of the change which has taken place, examine the entries which A. Twesten made in his diary during his sojourn at the University of Berlin in 1810 and 1811.¹ He was the son of a non-commissioned officer in the Danish army at Glückstadt, and came to Berlin immediately after the founding of the new university. In a very short time he began to associate personally with a number of most distinguished men. F. A. Wolf invited him to go walking with him twice a week, and also asked him to his house on certain days and evenings; at Heindorf's home and afterwards also at Boeckh's he read a Greek author with a small circle; Schleiermacher invited him to visit him occasionally in the evening; we also often find him present at social gatherings in Niebuhr's house. Fichte allowed him to put questions to him after the lectures and explained points in the lecture to him. Fichte also conducted a discussion-class, the members of which prepared essays on subjects assigned to them, which he afterwards returned with his criticisms. No one will think it probable that a stranger coming from such a class of society would meet with a similar reception in Berlin in our day.

¹ *A. Twesten nach Tagebüchern und Briefen*, by Heinrici, Berlin, 1889.

CHAPTER II

UNIVERSITY INSTRUCTION

1. *The Lectures.* Two forms of instruction have always existed side by side at the university, *lectures* and *exercises*. Although there have been manifold changes in particular points, the functions of the two have, on the whole, remained the same. The object of the lectures is to present the subject in its totality, while the aim of the exercises is to introduce those who take part in them into more or less independent work in the field.

The term *Vorlesung* (lecture) originated in the Middle Ages; it is the translation of the term *praelectio*. The thing itself, has, it is true, undergone some changes. In the Middle Ages the lecture consisted in a running exposition and interpretation of the contents of a canonical textbook. In its present form it harks back to the lecture which was common in the Greek philosophers' schools; it gives, at least as a rule, a systematic exposition of a science in a more or less extended series of lectures. The so-called private lectures take up, primarily, the fundamental subjects in connected form, while the public lectures usually present, in fewer periods a week, a topic of more general interest to a larger number of hearers, to which many are admitted who do not belong to the university. We have already stated all that need be said (pp. 87 ff) concerning the outward difference between these two forms, the payment of fees for the private lecture and the historical evolution of the system.

In spite of occasional objections urged against it, the lecture system has maintained its old position as the fundamental and characteristic form of university instruction, as distinguished from the recitation system. Of late the attacks upon it have grown more vigorous and have aroused the attention of wider circles, and have also met with assent. I should there-

fore like to consider these attacks at once and then discuss the nature and necessity of the lecture in the face of these objections.

Several years ago the historian Bernheim subjected the traditional lecture system to adverse criticism. He declared that it places the hearer in a passive attitude, limits his activity to hearing and taking down lectures which easily lend themselves to the need of taking notes, that, at best, but rarely, the student reviews these notes at home. Owing to the constant multiplication of lectures through specialization, which results from the growing extension of the sciences as well as from the progressive division of labor, the student is in danger of being completely buried under the mass of the great systematic lecture-courses. He saves himself from the state of stupid passivity to which he is reduced by constant attendance upon lectures, by cutting them. Bernheim recommends a complete transformation of the methods of instruction. The emphasis, he thinks, should be laid upon the independent use of the literary sources and upon the exercises which are to introduce the student to this work. The lectures should be limited to a few one or two-hour courses, which help the student to get his bearings, so that time may be left for reading and seminary work, by which alone the student can really be introduced to the subject. Participation in this work should be made obligatory, and only those semesters should be counted towards a degree in which written exercises have been produced, receiving the approval of the teacher.¹

In attempting to defend the lecture system in academic instruction, let me declare at once that I do not desire to praise it at the expense of the exercises. I too regard the exercises as an absolutely necessary means of supplementing the lectures. I

¹ E. Bernheim, *Der Universitätsunterricht und die Erfordernisse der Gegenwart*, 1896. I also mention two later treatises by the same author on the reform of university instruction, in which, however, the criticism of the lecture system is not so prominent, and in which also the demand for compulsory exercises seems to be given up: *Die gefährdete Stellung unserer deutschen Universitäten* (Rector's address, 1899) and *Entwurf eines Studienplans für das Fach der Geschichte*, 1901. The treatises of Bernheim are the work of a capable and well-minded critic who has the university's best interests at heart. We can hardly say the same for an essay by E. von Hartmann on university instruction in *Moderne Probleme*, 1886. The lectures are here treated with sneering contempt as an intolerable survival: they consist, he

am also of the opinion that they will be given much wider scope in the future. Moreover, I have no intention of taking up the cudgels for all the lectures that are delivered in German universities. There may be lectures with respect to which the objections urged are entirely in place, lectures which really consist in the reading of an unpublished book, or in dictating an overwhelming mass of facts, formulæ, or book-titles, lectures which affect such infinite thoroughness that they never succeed in giving a complete view of the whole, and never get beyond the beginning, beyond the introduction to the introduction, lectures, moreover, which clumsily fail or even purposely scorn to hook on to what is known and interesting to their hearers, and are in consequence despised as unintelligible and tiresome. But, I must add, just as there are teachers who do not understand the purpose of the lecture, there are also hearers who do not understand it, hearers, for example, who think that they ought to get out of the lecture course the sum total of knowledge necessary to pass the examination and who therefore expect the teacher to dictate or perhaps even try to force him to do it by more or less vigorous expressions of dissatisfaction. Then there are hearers who think it their duty to listen to all the lectures on the subjects in their field, and so hope to come into possession of the entire body of knowledge. And we might mention other misconceptions and shortcomings on both sides.

But all this does not prove that the lecture system is a useless survival. The mere fact that it has been preserved through all the centuries, from the time of Aristotle down, would incline me to believe in its reasonableness. I am convinced, the systematic lecture course will be retained for all times as an essential

• says, solely in the reading off or dictation of unpublished textbooks, obstinately ignoring the invention of the art of printing, which is now over 400 years old; the administration ought to suppress them at once by requiring the printing of the notes or the use of a printed book as the basis for the lecture. Similar sneering remarks are made by Dühring, *Der Weg zur höheren Berufsbildung der Frau und die Lehrweise der Universitäten*, 1877; no one has ever spoken of universities with more venomous contempt. The phrases about reading off lectures and the ignored art of printing are, however, already to be found in Fichte and Schleiermacher; presumably, they date still farther back.

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and indispensable form of scientific instruction. The important thing is that its purpose be properly conceived, by both professor and student.

I formulate the purpose of the lecture course as follows: Its object is to give the hearer seeking an introduction into a subject a living survey of the whole field, through a living personality, in a series of connected lectures. It should enlighten him concerning the fundamental problems and essential conceptions of this science, concerning the stock of knowledge acquired and the method of its acquisition, and finally concerning its relation to the whole of human knowledge and the primary aims of human life, and should in this way arouse his active interest in the science and lead him to an independent comprehension of the same.

I supplement this formula by adding a negative phase. The lecture cannot and should not aim to transmit to the hearer the entire material of the science, to place before him all the facts and problems, all the opinions and controversies, the complete history and literature of this science. That would be the object of a systematic manual. A lecture course aiming to supply the student with a complete manual and reference-book would necessarily miss its mark; it would invariably succumb in competition with printed works. Even an otherwise mediocre text-book will necessarily surpass the most carefully prepared lecture course and the most faithful and accurate student's note-book in the completeness of its material, the accuracy of its dates and bibliography, in the fulness of its accounts of the history of its doctrines, and of the problems and controversies discussed in its pages. But however true this may be, it is no less true that the right kind of lecture course excels the best text-book and manual in the other respect. Where the object is first to arouse an interest in a science, to create a belief in its value, to direct attention to the essential facts and problems, to present general leading points of view and thus to bring the student into active touch with the subject, even an excellent book accomplishes less than a lecture which only moderately fulfils its purpose, but which has behind it a living human personality.

To the novice beginning the study of a subject, be it theology or jurisprudence, history or natural science, mathematics or

political economy, it seems an endless and boundless field. The mass of facts and problems, of theories and opinions, of investigations and discussions, of literature and criticism, which overwhelm him in an encyclopedic hand-book or text-book, is infinitely multiplied, he stands before it all perplexed and discouraged, like a layman in a great museum or exposition. Here the lecture system offers its services as a guide. It takes him by the hand, leads him through the whole field, points out to him the really important and essential things and supplies him with principles and points of view for understanding and judging what he has seen. And now he begins to show an interest in the subject and to appreciate it; he becomes acquainted with the methods of the science and learns to apply them, and finally ventures to do more independent work in the field himself. It is true, a book may also serve as such a guide. But, after all, is not a personal living guide, with whom the beginner comes face to face, superior to the other? Let me point out in what respects the living word has the advantage over the book.

(1) In the lecture the hearer is confronted with science in the form of a *personality* that possesses it and is devoted to it. In case the personality is equal to the occasion, he is at once inspired with a belief in the thing itself. A book, especially a systematic manual or text-book, is a lifeless object that cannot create a belief; all faith is transmitted from person to person. The fact that a man who is standing before me and speaking to me, a man whom I respect and in whom I have confidence, believes in science, and devotes his strength and life to it, that alone inspires me with the belief in its importance and reality. This experience resembles our experience with foreign lands of which we have read in books and heard about at school. By and by someone comes along who has been there himself, who has lived and labored across the seas for years. He tells us of the country and the people, how to get there, what one can find to do over there, and how much money one can make. And now for the first time we are impressed with the reality of these things. Africa and America do not exist merely on paper, which contains so much not found anywhere else, but they exist as tangible and accessible realities, and with the belief in their reality we begin to find the courage to venture across the seas. The pupil

passes through the same experience with the sciences, through the words of the living personality of the teacher before him the past assumes a reality for the incipient historian or philologist which no book can give it. And so also the minutiae which no science can overlook, the different readings and fragments, the micrological observations and the laborious deductions, take on importance and value in the eyes of the pupil, without which he would lose heart in his work. In this way, if I may be allowed to give a personal recollection, Trendelenburg succeeded in encouraging his pupils to attack the study of Aristotle. We had heard a great deal about the philosophy of the old Greek, we had even attempted to read him, but we were deterred by the feeling of doubt whether it was really worth while to study him, whether, after all, his wisdom had not become antiquated. It was not until a man appeared before us in the person of Trendelenburg who lived in the Aristotelian philosophy, and who seemed to stand in a personal relation to the Greek, that we came to believe in the thing and its importance even for the present. And with this faith arose our courage to penetrate into an unknown world of ideas.

The words of Aristotle are still applicable: He who would learn must believe. To produce this belief in the student is the chief and perhaps most essential respect in which the instruction of the teacher excels the book, not to mention the part which the presence of fellow-students and fellow-workers plays in this matter. And a remark of Goethe which von Savigny quotes in a discussion of this very point, expresses the same thought: "Writing is an abuse of language, silent reading a sorry substitute for speech. Whatever influence man exerts upon man he exerts through his personality."

(2) The book is a fixed and finished product, the lecture is a living and moving growth; even in the outward form, for the book exists as a complete whole, while the lecture offers a small and comprehensible part of the subject from hour to hour. And even this is not presented to the hearer as a finished product, but is developed before his very eyes at the present moment. It is well known with what keener interest we watch the growth of a thing than we contemplate the finished product. For that reason the map which the teacher draws on the blackboard with

a few lines fixes the outlines of a country in our minds more firmly and deeply than the much more perfect picture in the atlas. Nor can the interest with which the hearers follow the development of the lecturer's thought be easily awakened by a text-book. And this interest is in turn communicated to the teacher. He comes into a mutual personal relation with his hearers and depends upon the moment for the effective phrase, the telling expression, and the illuminating comparison. And the word is assisted by the voice, the way in which it is spoken, the expression of the countenance, none of which things can be found in any book. And a hundred little things, side remarks, glosses, references to this and that, passing criticisms, which one cannot and is not willing to make in a book, are added, giving the lecture the personal, intimate character which no book can have. That is the meaning of the old expression: *vox viva docet*.

(3) This outward flexibility of the lecture is accompanied by an *inner flexibility* and freedom. It can and does, for example, employ different methods of presentation. The text-book demands unity of style and form, it prefers to proceed systematically according to the deductive, synthetic method. The lecture course is more flexible, it is not compelled to adhere to a fixed plan, in one chapter it can adopt one method, in another another, if it seems pedagogically desirable. It will, on the whole, incline to the analytical method. It will not begin with an exhaustive discussion of the fundamental concepts and principles, but will start out with known facts and phenomena, rising to the general concepts, or, in the words of Aristotle, it will pass from the *πρότερον πρὸς ἡμᾶς* to the *πρότερον φύσει*, from that which is known to the principles, while the text-book will attempt to develop the subject deductively. The lecture is also freer in the selection of the *material*. The text-book aims at completeness, uniformity, and accuracy in detail. Here too, the lecture is more flexible; it may, yielding to the interests of the teacher or student, dwell upon one chapter longer than upon another, and then rapidly pass over one that has less systematic value, for its object is not to furnish a reference book of which completeness and uniformity can justly be demanded, but to help the beginner to understand the subject, and to this end it

may be suitable to offer different materials in different proportions. Nor will anything prevent the lecturer from discussing occurrences and questions which happen to be of general interest, new discoveries, scientific controversies, literary productions, sometimes also public events. It would be foolish to ignore a subject in which the hearers happen to take a lively interest, nor would it be wise always to seek it out. The lecture has this great advantage: It is repeated at shorter intervals and can more easily keep pace with the events than a handbook which is intended rather to record the settled and permanent results of scientific labor. The lecture will absolutely refrain from overloading the student with dates and details, which are presented by the reference book. Details will have for it rather the value of methodical examples and illustrations. For it would after all be a useless undertaking to attempt to burden the memory of the hearer with a mass of detail. The object of the lecture is not to cram his memory with facts or to furnish him with a note-book that will prepare him for the examination, but to help him to understand the great and essential features of the sciences, as they are seen through the living personality of the teacher. If this end is realized, he will have no difficulty in handling the details himself, and in making profitable use of text-books and works of reference. The best that a lecture course can give a student is an active apprehension of the fundamentals, and the lecture can do this better than any book.

(4) All this is, of course, doubly and trebly true where *perception* plays an essential part, for example where the experiment stands in the foreground, as in experimental physics and chemistry or in physiology, or where the speaker's word explains a perceived object, as is the case in the clinic, or in archaeology, or the history of art. Since this method of instruction has been constantly extended in our century, it may be said that the lecture system, far from having become superfluous, has grown more and more indispensable.

In a certain sense the same results apply to the literary branches, including theology and jurisprudence. The larger and more boundless the field of literature grows, the more need there is of the lecture to emphasize the essential and important elements in the infinite mass of material. It is natural and

inevitable that the personal attitude of the teacher should determine what is to be selected; it may also happen at times that important facts are neglected and suppressed, and less important ones accentuated. Nevertheless, any accentuation of particular authors and works is better than the uniform monotony of the detailed accounts of a hand-book aiming at completeness. The essential thing is that definite points be first staked out as guide-posts for the uninitiated in the book-desert, which shall enable him to get his bearings.

(5) But there is still another side to the question. The lecture not only helps him who hears it, but him who delivers it. If the lecture system were not necessary for the students, it would be necessary for the sake of the *teachers*. Let us emphasize two points.

First, the systematic presentation of a science in lecture-form constantly directs the attention towards the *essential* and the *universal*. It consequently acts as a healthy counterpoise against the tendency of scientific research to *specialism*. Without the constraint, under which the teacher is placed by the lecture course, of getting a general view of his subject in its broad outlines and relations, many a man would be still more inclined than is the case at present to pursue his specialistic investigations to the exclusion of everything else, regardless of whether his work accomplished anything for the general conception of the subject or not. It cannot be doubted that he would thereby lose some of his ability and effectiveness as a teacher. I am also convinced that he would not gain anything as an investigator; nothing is better calculated to save the thinker from losing his way in the labyrinths of fruitless and senseless specialistic investigations than a contemplation of the whole of things, I should like to say, the philosophical element in every science. And every time the lecture course is repeated the demand is repeated to keep in view the whole and its inner connections, to accentuate the principles more sharply and distinctly, to systematize more clearly and definitely. The German text-books are used the world over, both in the original and in translations; a more or less satisfactory proof, it seems to me, that the German professors, too, have learned something in their lectures, and not only the subject matter, but also the method of teaching it.

Secondly, the teacher immediately perceives in the lecture, in the personal contact with his hearers, what is living, what is effective, what is fruitful, and what is true. Goethe once wrote to Frau von Stein: "Fritz [her son in whose education he was interested] was very well-behaved. I explained to him the first great educational efforts according to my new system; he understood everything very well and I was pleased with the attempt, which also made the whole matter clearer and more definite to me. Children are a good touchstone of truth and falsehood, they do not yet feel the need of deluding themselves as we old ones do." Is it not the contrast between the living presentation and the paper presentation which partly accounts for all this? Paper is patient; it accepts the most laborious ruminations and compilations, the mediocre, the barren, and the dead forms, just as readily as the living and vigorous and fruitful. It is much harder to say unreal and inane things in a lecture; we feel the opposition of the hearer who is repelled by artificiality and sophistry. Thus the lecture with silent, but perceptible force, draws us to the essential, the real, and the true.

(6) Lastly, the lecture is the only form of instruction in which a teacher can communicate his thoughts to a large number at the same time. Only a few can take part in the exercises; the active participation of the individual, on which the superiority of the exercises depends, diminishes as the number grows; if the number becomes too large, the individual is here condemned to stupid passivity more than anywhere else. Think of your school-days; can anything be more deadening than a large class of fifty, in which one pupil, more likely than not one who is unprepared or ignorant, mistranslates a passage or mangles the text, while the other forty-nine are condemned to watch the fruitless attempt? Well, the same thing would happen at the university if the exercises were made obligatory. When the number of participants becomes too large and the student who happens to have the floor or whose paper the professor is discussing, is not capable or energetic enough to do honest work, the others are dreadfully bored; at such a moment a mighty yearning is felt that some one acquainted with the subject give a connected account of it.

On the other hand, the effectiveness of the lecture is increased to a certain degree by the number of hearers. We are apt to speak in another strain to a hundred than to ten or five hearers; the many eyes that look up at the lecturer give wings to his thoughts, and lend his words such force and animation as cannot be attained within a narrower circle. It may be said that the great and far-reaching influences produced by university teachers have gone out from the large lecture halls. I remind the reader of Christian Wolff and F. A. Wolf, of Schleiermacher and Hegel, of Görres and Treitschke. Yes, those influences could only have gone out from large lecture halls, not from seminaries having ten or twelve members. I certainly do not underestimate the silent influence of these small classes, but it is unwise to underestimate the other form of instruction on account of them. To curtail the conditions essential to its existence would mean to deprive the university of its most forceful influence upon the intellectual life of our people. I am convinced that if we should follow the advice of the reformers and abolish the lectures or allow them to decline, if we should force our students to attend exercises several hours every day, the cry would soon be heard and compel recognition: Give us back the lectures.

And hence it will always remain true what Schleiermacher said in his discussion of this subject: "The true and peculiar good that a university teacher does will always be in direct proportion to his skill in the art of living speech."

2. *Cutting Lectures and other Habits.* The circumstance which gives the attacks upon the lecture system constant nourishment is the habit of cutting lectures. With Bernheim, too, this forms the starting point. According to him a more or less regular attendance upon lectures is the exception, to the discouragement of the teachers, to the ruin of the hearers, who thus come to regard the neglect of duty as a natural right of the students. Bernheim recommends the exercises for the reason that absences from them are much rarer, and because the participants themselves regard it as improper to miss them. We may grant that this is true in the case of smaller classes, but would not this advantage disappear if the exercises were made obligatory upon all? At present a few volunteers take part in the exercises;

if many students participated and were forced to do so, they would behave just as they behave with respect to the lectures which tradition and partial compulsion persuade them to take.

As regards the extent of indolence and particularly the cutting of lectures, I believe that some of us have greatly exaggerated notions of these matters. To be sure, it would not be telling the truth to say that everything is as it ought to be in this respect; there is a great deal of wanton shirking. But it is sheer exaggeration to pretend that regular attendance upon lectures is wholly the exception. This may be true of this or that particular subject, of this or that teacher, it may be true especially of the law students in this or that university, for there is considerable difference between the universities also. There are some in which idleness is in the air, in which tradition and environment are unfavorable to attendance upon lectures; the natural surroundings and the semesters also have their influence. What usually happens most likely happens in this instance; the bad cases are brought to light or rather force themselves upon the attention in a sensational and scandalous manner, and the accusers then make a general law of what this or that group is really guilty of. Presumably the parliamentarians, who make the complaints in the diet, are fathers of law students, and they have been students of law themselves. On the other hand, no mention is ever made of those who quietly pursue their studies without attracting public attention, as little mention as of virtuous women.

If I may trust my own observations, I should say that a very considerable number of students, one-half to three-fourths, to give a conservative estimate, attend lectures regularly: another fourth is occasionally absent, while the others, after a more or less constant attendance, attend only now and then. The number of those who purposely or actually cut lectures and who can be found only at the pot-house or *Frühschoppen*, is not so very large; at some universities and in some lines of work, this class is almost entirely wanting. The ubiquity of this class in all public places and in all humorous papers and anecdotes is responsible for the popular notion of its great size. The number of those who drop out in the course of the semester is larger.

We must not forget, however, that there may be legitimate grounds for this. Not to mention sickness, the student may be kept away by urgent work, especially during the last semesters, or even by an excess of *ennui* in the lecture room, for the thing is actually said to exist, here as well as in schools and churches. The teacher, however, who takes his subject seriously himself, and has something to offer, will, as a rule, have a grateful and faithful audience. In case he, too, sees vacant seats, towards the close of the semester, I should advise him not to take the matter too tragically, for after all it is human. Even old Kant, or rather the still youthful Kant, whose praises as an academic teacher Herder sang so loudly, had such an experience and consoled himself in spite of his rigorous conception of duty. In the announcements of his lectures for 1765 he explains why he has placed empirical psychology at the beginning of the course, before metaphysics: "Everybody knows what a zealous beginning the sprightly and fickle young men make, and how the lecture-halls then gradually become somewhat emptier. If now I assume that what ought not to happen will still continue to happen in the future, in spite of all gentle reminders, the proposed plan of instruction possesses a peculiar fitness. For the hearer whose zeal will have already cooled off toward the end of the course in empirical psychology (which is hardly to be imagined if we follow this method of procedure) would still have heard something intelligible to him on account of its ease, agreeable to him on account of its interest, and practically useful on account of the frequent applications made of it." Besides the consolation we may derive from having even a Kant as "a companion in misery" the hint perhaps deserves to be taken to heart: so far as possible to place what is easily understood, interesting, and practical at the beginning.

Let me add a statement with regard to the short, one or two-hour "orientation courses" which Bernheim recommends in place of the comprehensive systematic lectures. It is to be their function to give a condensed survey of the material and a brief exposition of the personal point of view. I am afraid that such lectures would be too apt to become barren compendia, consisting of collections of the chief data and dogmatic formulæ. To be effective a lecture needs a certain freedom of scope. When

it lacks this, when it becomes too condensed, it loses its force, and pleases neither teacher nor student. It sometimes happens that one attempts, towards the close of the semester, hurriedly to discuss a few topics in somewhat more condensed form. I have always felt that the thing did not turn out satisfactorily, even for the hearer; to my great surprise, at first, for I had supposed that a brief summary of important points could not fail to be of particular interest. But it is of no use, it is not the material, nor the thought, nor the solution of the problem, be it ever so valuable, but the manner in which the problem is presented and solved, in which the thought is developed, that makes the subject interesting and instructive. The physical man cannot live on extracts, even though they contain all the essential nutritive ingredients in purest form. One might at first imagine that the body, grateful to be relieved of the work, would prefer them for nourishment; but it refuses them. The digestive organs happen to be arranged for the purpose of selecting and digesting the useful ingredients from a mass of foodstuffs taken into the system. The same thing applies to the intellect; this too cannot be nourished by extracts prepared by some one else. Accepting with gratitude any guidance that may be offered, the mind endeavors by its own activity to search after and select that which is suitable to it, from the abundance of facts.

Hence the problem cannot be to abolish the lecture system altogether, or to restrict it in the manner indicated by Bernheim, but to make it effective and fruitful. At the same time it must be confessed that it is not equally applicable everywhere. There are subjects to which the lecture system is less adapted than to others, for example grammar, and also logic. Some teachers, moreover, are better fitted for exercises than for lectures, and finally there are universities in which certain subjects hardly attract a sufficient number of students for lectures. True, the old proverb says: *tres faciunt collegium*, but I believe three are not enough, to give the lecture the necessary resonance as it were. It would seem somewhat strange to deliver a lecture to one person instead of conversing with him. The same thing holds true so long as there are not persons enough present to hinder the speaker from seeing every hearer at the same time. In the lecture the circle of diffusion, if I may so

express myself, must be indefinitely wide; only in that case can the mode of general speech be justified. If the members of a small class are so irregular in their attendance that every absence is noticeable, the effect is, of course, discouraging. And in such an event it would indeed be best, in my opinion, to give the instruction more of the form of the dialogue. In fact, what would prevent the teacher from devoting one or two of the four hours a week to discussions in connection with the lecture or assigned reading? And why should he not occasionally interrupt the lecture with questions addressed to his hearers in order to make sure of their interest and power of comprehension, as well as to secure their regular attendance? Only we must not seek to destroy what is possible and effective under other circumstances, simply because it is not feasible at Greifswald or Rostock.

3. *The External Form of the Lecture.* This depends upon the function of the lecture. The lecture can realize its purpose only when it assumes an independent form of delivery. If it merely consisted in reading aloud or dictating a finished, but not yet printed book, it would, of course, be hard to understand, as Schleiermacher says, why a speaker "troubles people to come to him and does not rather sell them his wisdom which he has already set down in stationary form, in the ordinary way. For it would certainly be ridiculous to speak of the wonderful influence of the living voice with such a method." But this method is, most likely, not followed very largely at present, at least outside of the faculty of law in which the old practice seems to have been mostly preserved. The reasons are obvious, for here we have to do, for the most part, with a body of final and impersonal knowledge, comprehended into fixed formulas. Besides, an unusual number of lecture courses is offered; in no other faculty does a teacher offer three or four private courses in one semester. By an independent delivery we do not, of course, mean an extemporaneous lecture, whose form and content are produced at the time of delivery. That would be wholly impossible. No one has such a hold on a science as to have the whole subject and its details constantly before his mind. And even if any one had, it would be necessary to arrange the material for the lecture; to know a subject and to teach it are not

the same. Besides, the systematic arrangement is not always pedagogically the most desirable. Hence the lecture will have to be prepared, which means that the teacher will have to make notes. His notes may be more or less complete, that depends upon the subject or the professor's familiarity with it. They may contain the entire lecture in complete form, or they may be restricted to a systematic arrangement of the fundamental train of thought or perhaps to a presentation of the chief data, formulas, and catch words. To be willing to dispense with notes altogether would be to attempt the impossible, and would not result in good to the hearer. Nor is there any reason why the instructor should not bring his notes with him into the class-room, in order to refresh his memory on the general course of thought by an occasional glance at the manuscript, or to draw upon it for particular formulas, facts, quotations, and so forth. The purpose is not, of course, to present an oratorical work of art or a sermon, the effect of which might indeed be weakened by the presence of a manuscript; the sole aim is a simple and modest exposition of thoughts for the intellect. At the same time the teacher ought to speak off-hand in the sense that he should not keep his eyes fixed on the paper, but should be able to find the particular words and express his thought on the spur of the moment. To read from a completed manuscript would be to destroy the entire purpose of the lecture. An address that is read is lifeless, it cannot arouse the feeling of reality or actuality produced by the spontaneous speech. It also lacks the element of interest for the hearers as well as for the speaker, which compels the attention; in order to achieve that, the excitement of spontaneous creation and even the risk of failure are needed.

The method of dictating, like that of reading from a manuscript, also contradicts the purpose of the academic lecture; both methods are perhaps uniformly employed together. The dictation-method makes impossible not only the spontaneous communication of thought, but also the spontaneous comprehension of it; it invariably results in a merely mechanical activity, without inner interest on either side. And only an external compulsion of some sort or other will be able to hold students in lecture courses employing such a method.

A not infrequent practice is to dictate the most important propositions and then to elucidate them offhand. This is done especially in systematic lecture courses in order to place before the hearer the essential thoughts in fixed form and to guard him against his own inadequate conception or formulation of the same. I am afraid that part of the effect of the living word is lost here also. In case the matter is dictated at the beginning of the hour, the common search for results or at least the friendly illusion that the results are obtained by the common search of student and professor is given up. The less alert student will feel inclined to consider what he has black on white as the essential points and to look upon the elucidations as a period of recreation from the business of taking notes. In case the dictation is given after the subject matter of the lecture has been developed as a *résumé* of the same, which seems to be the more desirable method, the hearer is relieved of the trouble of summarizing the essential points of the lecture himself. In case nothing is dictated, he is compelled to pay active attention to the entire lecture and to bring out the essential points of the train of thought himself.

It is different with a printed syllabus which gives the hearer an outline of the topics to be discussed and so makes it easier for him to find his bearings. The syllabus may also contain bibliographical references and similar items which unnecessarily overload the lecture.

Shall the lecture be based upon a *text-book*? This was formerly done; in the eighteenth century after the discontinuance of the practice of lecturing on text-books, this method was repeatedly enjoined upon the Prussian university teachers by the government. Kant, for example, during his entire life based his lectures on text-books on metaphysics, logic, and natural law, written by Baumgarten, Meyer, Achenwall, and others. The demand has recently been made by E. von Hartmann, as was mentioned above (page 190), that this method be re-introduced and that professors be compelled to follow it in order to prevent them from "dictating unpublished text-books."

I cannot convince myself of the advantages of the method, but at any rate the coercion would be unbearable. Ought the teacher to select another man's *text-book*? But he can find none

that agrees with his own views. This was Kant's experience, and he therefore completely ignored the text in his lectures except that he allowed it to force upon him rather than to suggest to him the arrangement of the whole. The plan, however, of using a text-book side by side with the lecture can hardly have facilitated the student's understanding of the subject, if we may trust the notes which are still extant. Imagine a Schleiermacher obliged to lecture on some text-book on logic or ethics, or a Treitschke on a text-book on politics.

Ought he then to make a text-book of his own to lecture on? If only he were already able to do that! The very thing he is trying to accomplish is to compass the whole of his subject as he sees it. The repeated lectures are so many attempts in this direction. And would he still feel inclined to lecture on the subject after he had written the text-book? And would the hearer still have the desire to hear him? What would become of the interest if the results were already printed? Indeed there is something insipid in interpreting one's own text-book. Better another man's book; the friction of one's own thoughts with another's would put a little life into the thing. But can we take for granted that every student has read the book, that he has learned the *paragraphos* off by heart? Hardly. The contents of the book will therefore first have to be presented and developed. But that will make the book superfluous or inconvenient; and it would be better to take some other starting point. We see why it was absolutely necessary to discontinue not only the medieval custom of interpreting a canonical text, but also the method of lecturing on a text-book. The lecturer will mention good text-books and recommend their use; he will repeatedly refer to them and base his own expositions upon them. But he will not make himself absolutely dependent upon them. The fact that the teacher and student construct the science together, as it were, in the course of the lectures, is what gives them both pleasure in the undertaking. The entire proposal is based upon a mode of thought which is wholly out of touch with reality, with the active progress of science. It may be feasible to give Latin elucidations of Latin text-books in Catholic universities; the thing is impossible in a modern university.

4. *The Inner Form of the Lecture.* Instruction is the object of the lecture. That determines its form; it appeals to the understanding, not to the emotions or the will, or at least only through the mediation of the understanding. Hence eloquence and pathos are not suited to it, at least not that form of eloquence which employs rhetorical means. There is also an eloquence for the intellect; an eloquence of the facts themselves. It knows how to present the facts in such a manner that they seem to speak for themselves, it arranges them so that they seem to draw the conclusions themselves. At the end of the lecture the hearer feels as though he had thought all this out himself and had told it to himself. This inner, logical "purposiveness" is the chief means of holding the hearer's attention in a lecture and of permanently interesting him. The German student, let it be said to his credit, is not very susceptible to rhetorical effects, to pathos, catchwords, and the like, and soon grows tired of them.

That form of speech will be most suited to the scientific lecture which is simple, convenient, and strikes at the heart of the subject. Too much subtlety, ornateness, and elegance are apt to tire the student and to divert his attention. The lecture should not be filigree work, otherwise it will fail to bring out strongly and sharply the principal outlines of the subject, which is more important than extreme care in details. The best plan is to prepare an outline embodying the essential ideas in a systematic and easily handled form and then to speak *impromptu*, following the scheme, but elaborating it freely and not hesitating to make use of repetition, all the while keeping in active touch with the hearers. An approximation to the conversational form, which is easily compatible with warmth and animation, is better suited to instructive speech than long and fine-spun periods, elegant and pointed phrases, or even oratorical display. All that soon becomes tiresome and insipid. Whoever is in search of knowledge does not care to be captivated by the form, but to be convinced by the matter. The philologist, F. A. Wolf, himself a master in the art, once gave the following description of the form to be followed in the academic address: *Familiarem sermonem oportet esse lectionum, varium illum quidem pro varietate rerum et multiform-*

mem, neque tamen ulla parte similem libri. This, in general, describes the form of the lecture as it is customary in Germany. And the simplicity of the outward forms corresponds with this, the lecture rooms and their equipment, the bearing and attitude of the teachers; there is nothing of official pomp or *grandezza* in their personal appearance. The display which is customary in other countries along this line (in France, for example, the professor takes his chair, clad in solemn robes and accompanied by a beadle wearing the official chain, who remains standing by his side during the entire lecture, von Savigny, p. 154) would be somewhat embarrassing to us. A great deal of oratorical display would be necessary to justify such pomp and to hinder it all from seeming incongruous.

A lecture may be not only too elegant, but also too thorough. It necessarily becomes so when it attempts to drag in and discuss at length, all possible facts, questions, doubts, objections, opinions, and whims. This may perhaps occasionally be done for the sake of example; for the most part, however, the student's gaze should be turned in the direction of the great and essential points. Otherwise he will lose himself in the accidental and secondary until he does not see the forest for the trees. It is better now and then to repeat the important phases from a new point of view than to discuss the insignificant and superfluous as though they had equal value. The physicist Lichtenberg once said (*Vermischte Schriften*, I, 221): "I am convinced that so-called thoroughness in the presentation of the elements of a science is very harmful. It is not at all necessary for a teacher to present the subject to the beginner in a thorough manner; but the teacher who presents a subject must understand it thoroughly, in which case the beginner is certainly taken care of."

Of great importance is clear and transparent classification. *Bene docet qui bene distinguit*, says the wisdom of the Middle Ages, mindful of two points: care in the differentiation of concepts, particularly of closely related concepts, and care in the differentiation of speech. With regard to the latter the lecture must repair the absence of the visible means of classification, which the book has at its disposal, the paragraphs, sections, and chapter-headings, by means of speech. A very essential item

in making things intelligible to the hearer and holding his attention is to emphasize clearly the conclusions of particular topics, the transitions to new topics, the development of an argument, giving the thesis, proofs, conclusions, and so forth. Point out to him the goal and give him the necessary finger-posts, and he will cheerfully and safely follow even intricate paths of the discussion.

Nor does it seem unimportant to me that each hour should form a complete whole so far as that is possible within a systematic lecture; a piece torn out of its connections, without beginning and end, makes an unpleasant impression on one, even from the artistic point of view. Besides we shall have to assume, after all, that the student will miss a lecture now and then. But, some one might ask, will not your plan encourage this very thing? Do you not exempt the absentee from the punishment, as it were, of not finding his bearings? Perhaps this is true. And yet I believe that it is fitting, to speak with Kant, to reckon with what actually happens here, although it ought not to happen. I also believe that the act of deterring the student by punishment, by preventing him from understanding the subject under discussion, would prove less effective than the incentive he would receive if a new topic were taken up at the beginning of each hour, and he were enabled to follow the subject without knowing what was said at the close of the last hour.

5. *Polemics in Academic Instruction.* The way to truth leads through error. All progress consists in showing that the past truths were errors, or at best half-truths. That does not make them superfluous; they constitute the stages by which the human mind ascends its precipitous path. Struggle is therefore the life of science, the struggle between the old and the new truths. The old ones defend their possessions, the new ones seek to prove their necessity by the insufficiency of the former. Conflict helps the truth; indeed, do we not even regard the lawsuit as a struggle between two parties for the purpose of bringing out the pros and cons and thus ensuring the correctness of the verdict? So, too, historical life, with the teleology immanent in it, produces a conflict of opinions in the service of the search for truth. This struggle, at the same time, adds to the latter a high

degree of interest; the progress of knowledge is crowned with the pride of victory in battle.

From this it follows that controversy has its use even in academic instruction. To introduce the student into the conflict of opinions means to carry him right into the heart of the science, and at the same time adds zest to instruction. The polemical element gives the lecture the dialectical form, it leads the speaker to prepare his case for trial, as it were, to unfold the question at issue, to contrast the different possible stand-points, to point out the facts as they appear to each party, to bring out the arguments clearly and sharply. There can be no doubt that the subject thus increases in interest; the mere dogmatic exposition is apt to have a monotonous and deadening effect. Though there is a place for controversy, as we have described it, in the lecture course, there is none for calumny and vituperation, abuse and reproach; nor is the university the place for holding views or persons up to ridicule. The place itself and its dignity forbid it, or ought to forbid it, for I am afraid that the boundary is, as a matter of fact, not infrequently overstepped. The philologists have been in the habit of claiming particular privileges along this line and the historians now seem to be following in their footsteps, while the natural-scientists and mathematicians are for the most part strangers to the custom. Is it because the uncertain sciences, as J. Grimm once said, are nearer to our hearts? It seems to me the fact that the party attacked cannot reply should be enough to banish this evil custom from the lecture-room; there is something malicious and cowardly in slandering an absent one. Nor is it either dignified or instructive to set up a dummy and to knock it down every once in a while for the amusement of the spectators. If the hearers learn anything from these methods, it certainly cannot be anything good. "Tell me, is there a country outside of Germany where one learns to turn up one's nose before one learns to blow it?" Lichtenberg once asked, and we might add: where people are really taught to turn up their noses and to split hairs?

In order to caution men against error, we must present it in its relative strength; to make it absurd will mislead no one. Polemical discussion is in place only where the combated

theory has something to justify it. And here the task is first to play the advocate of the theory before deciding against it as a judge. This method of procedure is particularly desirable when the problem is to enforce new ideas against old traditional theories. First we should state the theory which we have reason to suppose is also held by the hearer as the dominant one, then we should point out its reasonableness, the facts on which it is based, and then we should go on to show that it is inadequate to give a satisfactory explanation of all the facts and that a new explanation is necessary. When the hearer is guided in this way, he will understand both the actual and historical necessity of the new theory. A polemic, on the other hand, against the absurd and meaningless is superfluous. I do not see what rational grounds there can be for acquainting the hearer with all the possible absurdities, when so much needs to be done in order to teach him what wise and sensible people have thought.

That man has the greatest cause and right to employ the polemical method who is defending new truths against prevailing errors. This is largely the task of the younger man who, while engaged in this task, is at the same time struggling to assert himself. He feels the pressure of the traditional, even in his own person; the authority of older generations lies heavily upon him; for which reason we are more inclined to bear with his somewhat excited talk and even with a little arrogance on his part. He has not yet made a name for himself, yet feels that there is something in him. At the same time he too may be charged not to call everybody whom he has convicted of error, an ass or to give him to understand that he is an ass. A still more disagreeable impression is made by a literary controversy or even a spiteful quarrel among men who are well along in years. We have a right to expect something from that maturity of mind which is the best fruit of a long life devoted to research, that *mitis sapientia*, which is able not only to attack, but also to understand errors. Still another fact might deter the man of experience from polemics. The young man still believes that he can convince his opponent, that he can force him to see his error. One who has lived in the scientific world for a longer period, knows or ought to know, that that is

impossible. I doubt whether a single case could be cited in the history of the centuries in which a literary quarrel had been terminated by the confession of error. The gratifying thing about a war with arms is that it unequivocally decides who is the stronger. The war with words has no end and is never decided, in Proteus-like transformations error always succeeds in eluding the toils. The wise man will therefore aim, first of all, to tell the truth and not to ensnare error merely in order to refute it.

6. *Seminars and Exercises.* The seminary exercises follow from the nature of modern academic instruction. This aims not merely to transmit knowledge already acquired, but to introduce the student to scientific work, not merely to propagate knowledge itself, but also the knowledge of how to acquire it. Thus it is not enough in the mental sciences to know the organization of the Carolingian Empire, or the origin of the Pentateuch, one should also understand on what our knowledge of these things is based and how it has been acquired. Only he who knows the way to the sources and is able to draw from them, possesses original, scientific knowledge. And similarly in natural science, only one who understands the method of creating scientific knowledge, who knows how to use the experiment, the microscope, calculation, the method of error, possesses scientific knowledge in the real sense, *ἐπιστήμη*, to use Plato's expression, as distinguished from mere *δόξα*.

The student can be introduced to scientific research only by the method of coöperation. And that is the real purpose of the seminars; they are the nurseries of scientific research. In them, under the guidance and assistance of a master, pupils become acquainted with scientific work and learn how to do it. After their apprenticeship they continue the work themselves as masters and for their part preserve and improve the methods and train the younger generation in their use. The seminars are therefore the essential factors in preserving the continuity of scientific work.

The seminars are as old as the present organization of the German universities. Their origin goes back to the eighteenth century, the century in which the university passed from the old traditional methods of instruction to the principle of the

freedom of research*and teaching. The new humanistic philology formed the starting point of the reform; the seminar established by Gesner is the oldest; it was still a cross between a seminary for teachers and a seminar for scholars. Although the seminar founded by F. A. Wolf at Halle was intended to be a pedagogical seminary, it showed a more pronounced tendency to introduce the student into scientific research. The nineteenth century has adhered to the method and has extended the seminar system to all the departments of university instruction: first to the different branches of the philosophical faculty, to the historical, natural-scientific, mathematical, and social sciences; then it passed over into the faculties of theology and law, to which, moreover, the so-called *practica* had long been familiar. The medical faculty has instead of the seminars the so-called *institutes* (laboratories) and clinics. It is worthy of note that the pedagogical seminars, which aimed to prepare the student to teach in the *gymnasia*, and which really represent the starting point of the seminar system, have gradually separated from the university, and have become allied with the schools themselves. This is due to the development of the philosophical faculty in the direction of purely scientific research, as well as to the belief that it is possible to introduce the student into practice only by practice, only, that is, in a real school.

The seminars are public institutions; admission to them is regularly conditioned by evidence of efficiency and likewise obligates the members to perform regular tasks. They are supported by public endowments, from which small sums of money are granted to the members, which, however, serve rather as a means of encouragement and recognition than as a means of support. Of great importance is the equipment of these seminars, during the last decades, with libraries and rooms for work; the new university of Strassburg has been epoch-making in this respect. The members of the seminars are in this way relieved of many disturbances incident to the use of the general libraries.

The method of work differs, of course, according to the nature of the subject. In the philological-historical sciences, on which the theological and legal sciences depend, the essential task is to acquire skill in the use of the sources, hence in reading, inter-

pretation, text-criticism, historical criticism and interpretation, practice in which is at first acquired by a common and thorough study of the sources. The individuality of the teacher is also bound to assert itself; he will naturally prefer the lines of work in which he has been successful and the methods of which he is a master. The solution of larger scientific problems by the individual student, with the means at his disposal and under the guidance of the teacher, is common to all seminars. Such pieces of work often form the basis of doctor's dissertations, the first specimens of independent scholarly work. Good dissertations are the pride of the director of the seminar.

Besides these regular, publicly organized seminars there are private societies, associations, reading-clubs, and exercises. They are more independent in their movements and pursue diverse aims. It is a common plan for the members to read some standard author or some text. Especially the younger teachers, who are not yet in charge of a seminar, gather around them a small number of students and not infrequently achieve great results.

Still another type of academic instruction is to be mentioned: the so-called *conversatoria*, *disputatoria*, and *repetitoria*. It is characteristic of these that they are connected with a lecture course. Their object is to help the student to understand and assimilate what has been presented in the lecture, to solve difficulties, to answer questions, etc. In the eighteenth century such exercises accompanying the lectures were very common; Kant, for example, offered them during his entire life under many different names. During the nineteenth century they have retrograded more and more, in spite of the fact that the university administration from time to time urgently recommended them to the docents.¹ The reason may be sought in the changed relations existing between professors and students since the eighteenth century. *Repetitoria* and *disputatoria*, in the form of question and answer, are a continuation of the scholastic relation between professor and student; the preconditions for such a relation have, however, gradually disappeared in the nineteenth century. The large attendance and the rapid

¹ See the circular letter by Minister Eichhorn of the year 1844 in von Rönne, *Das Unterrichtswesen des preuss. Staats*, vol. ii., pp. 515 ff.

change of university residence make it difficult for the professor to become personally acquainted with the student, and without such personal acquaintance the method mentioned cannot be fruitful. Then again the more advanced age of the students renders the adoption of the methods practised in the school-room objectionable. Finally, the seminars and exercises supply forms of personal guidance and influence which are better adapted to the new conditions.

7. *Exercises for Beginners.* A not unessential supplement to the seminars is being developed at present, the exercises for beginners. The seminars always presuppose some familiarity with the subject, and they usually admit only the more advanced students to membership. The beginner, however, more than any one else, needs helpful advice in order that he may learn to do fruitful work. After groping around blindly and aimlessly for a while and finally becoming aware of the futility of his efforts, he is apt to give up entirely and to postpone independent work to some future date. This happens in all the departments, most frequently perhaps in the philological-historical, including the theological and law schools. Here again the philologists have made the beginning with institutions which satisfy the need. The *proseminars* admit the beginner and introduce him to the subject, offering him also the necessary practice in the use of language. In a little work by Bernheim which we have already mentioned (*Entwurf eines Studienplans für das Fach der Geschichte nebst Beilage: Beispiele von Anfängerübungen*, 1901), the author shows by examples taken from medieval and modern history how he conceives and solves the problem of such exercises for beginners in the field of history. It would be desirable to get from teachers frequent reports of their own methods; I consider them the most fruitful form of the literary treatment of what we have of recent years sought to embrace under the title "university-pedagogy." If the masters of a subject could be induced to discuss their methods of conceiving and solving the problem of university instruction in their particular lines, a number of opinions might gradually be gathered together that would make it easier for teachers to find the right path in the future.

The law faculty has also begun, of late, to extend its instruc-

tion in this direction, and the administration has shown an interest in the matter. It has even decided to require the exercises on civil law and civil procedure of all students, not without making the usual discovery that compulsion is not a strong motive to study. According to rumor, the purpose is to introduce still further changes along this line in legal instruction. Proseminars in Roman law are to be established, and all students are to be required to take these courses, during the first semesters, in small sections. Not until the student has successfully completed these courses will he be admitted to the second and final stage of the study of law. However desirable a thorough study of Roman law may be at the beginning, I am not sure that the disadvantages of such restrictions would not outweigh the advantages. Every addition to the number of exercises offered for beginners is to be welcomed, but I cannot conceal my objections to making them compulsory. But this side of the question will have to be taken up again later on.

I desire also to mention that a somewhat similar scheme was proposed for the theological faculty, years ago, by M. Kähler, of Halle. He referred to the Tübingen *Stift* and the institution of *repetentes* as an example worthy of imitation. Competent young men who have completed their course of study with distinction might, he thought, under the supervision and with the advice of the professors, give assistance to a smaller number of younger students. By going over the matter of the lecture with them, explaining and familiarizing them with the fundamental principles, reading the original texts with them, instructing them in the application of the scientific methods, they would help beginners to overcome their first difficulties and make it easier for them to get acquainted with their subject. Kähler is right in assuming that a spontaneous demand would follow the supply; "the forlorn condition and restlessness of the beginners are often indescribable; their susceptibility to stimulating influences great. And younger men are particularly fitted to exercise such influence. They are closer to the students than the professors, and hold a place in the minds and the hearts of the students similar to that of older fellow-students."

The teachers of such courses would also derive great benefit from them. To review a subject as a teacher, after having

studied it, leads to a deeper and more independent comprehension of it, as experience proves. The work would also serve as a preparation for an academic professorship; successful performance of it, combined with scientific achievements, would make promotion, first to a private-docentship and then to a professorship easy; and the practice acquired by the young man in elementary, scholastic instruction, as well as his familiarity with the difficulties encountered by the beginner, would also help him in his subsequent work as a teacher.

There is another not unimportant side to the matter. The student would at the very beginning of his course have an opportunity and the incentive to produce smaller pieces of work of a more general character, which would, however, not pretend to be original scientific investigations, but which might be looked upon as continuations of the composition exercises of the *gymnasium* on a higher plane. The ability to carry on a systematic line of thought, let us call it rhetorical-literary training, is too often lacking in our students at the end of their course. What they have learned at school in this respect has gathered rust from long disuse. Opportunity for practice could be afforded by the exercises for beginners in all the sciences. They may also find a place in the independent scientific associations of the students. In certain respects short essays offered for criticism and discussion in such circles would do the student more good and be a greater incentive to others than if they were written with a view to criticism by a teacher.

In this way we might approximate the English-American system with intermediate and transition stages between the school and independent scientific research. Such an arrangement is desirable for more than one reason. It is indeed a big leap from the school to the university, and for many it is dangerous. Most young men, we may safely assume, enter the university, if not with a burning desire for knowledge, at least, like the student in Faust, with the honest intention to learn something and with the purpose not only to enjoy life, but also to do fair work. Although many things contribute imperceptibly to weaken his purpose, yet one of the reasons is that the student does not know how to begin. The lectures are not infrequently wholly beyond his powers of comprehension; in the very nature

of the case they cannot be adapted merely to beginners. There is a lack of systematic instruction in the intelligent and methodical use of the scientific literature. The result is, the original enthusiasm of the student, even where it was present, cools off, he becomes discouraged, loses heart, and stays away from the lectures and so gradually falls into lazy habits.

8. *The Medical and Natural Science Institutes.* By the side of the seminars, which we find particularly in the philological-historical branches, are the numerous *institutes*, laboratories and clinics, in which the ramified natural-scientific and medical instruction has its chief place. They, like the seminars, first arose in the eighteenth century; during the nineteenth century they reached a truly wonderful development.

The beginning was made in medical instruction; its connection with the game of war proved beneficial to it. For a long time there had been occasional demonstrations in addition to the lecture; in the eighteenth century the instruction in anatomy was gradually based upon the dissections made by the students; in the nineteenth century these constituted the regular foundation for the entire scientific training of the physician. Instruction in physiology followed. In the same way, since the beginning of the eighteenth century, as the hospitals developed, the regular clinical instruction, on which the practical training of the physician now rests, grew out of the earlier occasional demonstrations at the sick bed.

Instruction in the natural sciences did not reach its present development until the nineteenth century. It owes a large part of its progress to the growth of medical and technical instruction. It began in the first half of the century with small private laboratories for the participation of the students in physical and chemical experiments and investigations; out of these grew the great physical and chemical *institutes*, during the second half of the century, in which investigation and instruction are now combined. How unwilling the university administrations were at first to incur the unusual expenditures connected with these institutes, Liebig, the founder of the first university chemical laboratory at Giessen, found out to his sorrow. The golden fruits have since made the governments more tractable. To the physical and chemical laboratories or institutes are now added the zoological,

botanical, mineralogical, and geological-paleontological institutes with their scientific collections. The aim of the instruction in all these widely ramified institutions is above all to train the student in the use of the apparatus and methods of investigation through which the modern natural-scientist seeks to penetrate the secrets of nature.

The natural-scientific and medical institutes have caused an astonishing increase in the budgets of our universities. The establishment of a university two hundred years ago meant an expenditure of a few thousand thalers a year. Now the original equipment costs many millions—the buildings and laboratories of the new University of Strassburg made necessary an outlay of nearly fourteen million marks at its foundation—and the annual appropriations of a larger university range from one to two millions, the greater part of which is spent on the laboratories. It is of course through these institutes that the universities come into closest touch with the life of the community; the medical faculty with its clinics is the hygienic center of the entire province. And our physical and chemical institutes have helped the German people to achieve the position which it at present occupies in the economic world.¹

It is not saying too much to declare that the development of the seminars and institutes in our universities during the nineteenth century has contributed more than any other cause to give the German people the leadership which it now holds in the scientific world. This fact has not escaped the notice of foreign nations. When the Minister of Instruction, under Napoleon

¹ A. Wagner has discussed the development of the University of Berlin, especially from the financial-statistical side in his rector's address, 1896; let me give a few data here. Expenditures for salaries and institutes show the following growth:

Year	Salaries	Institutes
1811.....	116,550 (71.8%)	39,294 (24.0%)
1834.....	193,650 (64.6%)	78,434 (26.2%)
1880.....	321,000 (52.8%)	267,000 (41.1%)
1896-7.....	865,000 (30.9%)	1,481,000 (52.9%)

All the seminarier in the mental sciences (there are 18) cost 17,650 marks annually; the 15 natural-scientific institutes and collections cost 379,798 marks, the 10 medical-scientific institutes 190,054 marks, the 10 clinical institutes 617,691 marks.

III., Duruy, organized the *école pratique des hautes études* at Paris in 1868, he explained the need of it, in a report recommending to the Emperor the establishment of the institution, by referring to Germany, whose natural-scientific institutes had enabled it "to reach the high development in the experimental sciences of which we take note with *troubled sympathy*." And he likewise attributes our preëminence in the philological and historical studies, "which are held in such high esteem on the other side of the Rhine, but are at present not sufficiently honored by us," to the effectiveness of the seminars, noting that the French professors confined themselves to the logical-rhetorical development of the lecture.¹ And the American universities, like the French, have taken the German universities for their models in this regard: *original research* is the catchword which has guided the reform in that country during the last twenty years.

In conclusion, I cannot wholly stifle the question: Is the willingness to supply natural-scientific, medical, and technical instruction with the necessary equipment, accompanied by a corresponding willingness to do justice to the infinitely more modest demands of instruction in the mental sciences? Here the libraries form the chief basis of scientific study. Now, it is true that the appropriations for the equipment of university libraries have been considerably augmented during the last decades. The equipment of the reading rooms with accessible reference libraries is also an advance, while the seminary libraries have been gratefully received. Nevertheless it can hardly be said that all just complaints have thereby been removed. The number of persons who order books and come away from the supply-desk unsatisfied, because the desired books are in circulation or not in the library, continues to be rather large. Our libraries ought, it seems to me, to adopt a principle similar to that of the circulating libraries: the number of copies ought to depend upon the demand. If these libraries can pur-

¹ In the report by Lexis on the French university system in *Hochschulnachrichten*, May, 1901. In order to understand the condition of the French faculties and the difficulties of the minister, we must call to mind that the total budget of the state for all the faculties of the land in 1867 amounted to 221,154 francs (von Savigny, p. 27).

chase ten or twenty copies of new books for which there is a great demand and afterwards sell the surplus at second-hand when the demand decreases, I do not see why the university libraries cannot do the same thing. They ought to act on the theory that every unfilled order is a loss in intellectual power to the nation. At the very least, the person ordering loses time, perhaps makes two or three fruitless trips to the library, and meanwhile is delayed, much to his disgust, in what may be an urgent piece of work. Or he loses the lively interest which he may happen to have at the time, and the disappointment caused by his futile efforts makes him give up more easily in future. Or is it perhaps to be feared that the student's inclination to buy books will be still further weakened by increasing his loan-privileges too much? I am almost tempted to maintain the opposite; there is, according to my experience, no more effective motive to purchase a book than to have learned its worth by previous use.

I hardly dare to raise the question whether the natural-scientific equipment may not be excessive. Modest furnishings and apparatus can be more easily surveyed and managed; they also compel the independent invention of instruments of research. Where everything is at hand in abundance we are apt to become spoiled, and this is a serious thing when we are afterwards forced to get along with a meagre equipment. K. von Raumer once touched upon this point (*Geschichte der Pädagogik*, IV. 251): "The extravagant amount of apparatus in many larger universities is even an impediment in instruction. The students are not able to comprehend the enormous mass of material; we know that a lamp may refuse to burn as much from an excess of oil as from a lack of it."

*9. *University-Pedagogy*. The attempt is now being made to establish a new science, or rather a new branch of an old one, under this title. Plans are being formulated, an association founded, and a movement set on foot to enrich the science of pedagogy, which has proved of such great importance for the other schools, with a general theory of university instruction. It is also intended to establish a practical institute for the training of teachers for the different kinds of university, a university-teacher's seminary. We see the ideals are far-reaching. In the meanwhile, however, the efforts have hardly gone beyond the

stage of plan-making. And I do not know whether fate intends that they should get any further.

It is not to be denied that there is an art of university instruction, nor that different men possess and practise it in different degrees. Therefore the conclusion seems to suggest itself: hence there ought to be a theory of the art and systematic training in the art; a didactic of university teaching—for I should prefer this term to the term pedagogy, as we are not concerned in the university with children and the education of children—and a training school for teachers.

However, certain objections soon present themselves, first, against the theory, or university didactics, as such. There can be a theory of child-training, and also school-pedagogy and didactics, because here we have to do with a problem identical in its fundamental principles: the same human nature, the same conditions of development, the same subjects of instruction, the same methods and means of instruction, the same difficulties, though in larger or smaller degree. In the university or in the universities we have to deal not with the same *abc*, the same kinds of arithmetic, the same elementary grammars, but with the most diverse problems. On the one hand we have classical philology or Egyptology, on the other, mathematics or chemistry, anatomy or psychiatry; in the technical universities, mechanical engineering, on the one hand, metallurgy, etc., on the other. Each of the different sciences has not only a different subject-matter, but also different methods of investigation, hence also different methods of instruction, for the real aim is to introduce the student into scientific research itself. Shall one "university-pedagogist" teach the methods of all the disciplines which are offered in the university? Well, the *didacticus* would have to be in possession of an astonishing amount of knowledge, in possession of an *artificium omnes omnia docendi*, for which old Ratichius would have envied him. But, if that is not possible, there will have to be as many teachers of university didactics as there are university sciences and arts. And that means that things will remain as they are; only the masters of a science, the men who investigate and teach it, are fitted to teach the art of university teaching in that branch. And this can be accomplished best as follows.

UNIVERSITY INSTRUCTION

Whoever wishes to learn the art of teaching, or to use the curious term, university-pedagogics, in classical philology or gynecology, will attend the classes of a master in the art and will learn from him both the science and the art of teaching it, at the same time. As for the literary treatment of the matter, however, the master himself, again, will have to give it by telling us how he practises the art of teaching. The "personal equation" will of course make itself felt everywhere. Just as there is no universal method of scientific investigation, so there is no universal and fixed method of introducing the student to research. *La méthode c'est moi*: that is what the masters of "university-pedagogics" have always said hitherto, each in his own line.

But, it will be said, there surely are some universal principles in the different forms of university instruction, uniform types, uniform conditions of success, uniform difficulties. Well, to be sure, lectures will be delivered in all the departments and exercises held besides. And we can certainly formulate universal statements concerning the purpose and form of the lectures as such, concerning the purpose and form of the exercises, as well as concerning the function of both teacher and pupils; all of which has been attempted in this book. But it does not seem advisable, in my opinion, to claim for such statements the dignity of a special "science of university-pedagogics." The contrast between the modest content of such a science and the imposing form would be too glaring, and would give one a still poorer opinion of the value of such discussions than is already held. For many university teachers will feel inclined to comprehend the sum of all university-pedagogics in a single sentence, the sentence in which, according to F. A. Wolf, the whole of gymnasium-pedagogics is also embraced: "Have a mind and learn how to appeal to the mind."

Still more serious are my objections to the proposed practical institution, the "university-teacher's seminary." It seems to me, there is something strange and almost comical in the name itself, suggestive of other possibilities: a seminary for the teachers of a seminary for university teachers; and so on *ad infinitum*; teachers who teach teachers how to teach the art of teaching in a university-teacher's seminary. The thing will have to stop somewhere, and I think it ought to stop at the

university. For the men entrusted with the duty to pursue and propagate scientific research, the university itself is the proper school to learn both functions, and a university beyond the university, which shall teach the art of university instruction leads inevitably to the *regressus in infinitum* mentioned above.

Or does anybody really believe that such a thing is possible, not merely on paper, but in actual fact? In a "Plan of a Seminary for University-Pedagogics," published January, 1899, under article I., the purpose of the institution was stated to be: The seminary has as its purpose: (a) "to train teachers for all universities in everything that pertains to the pedagogical side; (b) to transmit the entire stock (!) of knowledge (!) and practice (!) which is subsidiary to this purpose; (c) to represent, at the same time, in its own methods and achievements a pedagogical model school and to realize in itself the superior advantages demanded of every university system." An institution, therefore, which shall train teachers for the university with its four faculties, for the schools of technology with their four divisions, for the higher schools of painting and of music, of commerce and agriculture, etc., by offering these teachers, first, the theory of their art, secondly, "all knowledge and practice" involved in it, and, thirdly, by affording them the opportunity "for practice work in university instruction by providing a practice school."

Let us return from the world of dreams to reality. Our universities have thus far also been seminaries for university teachers, and will continue in that role for the future. The form in which they realized this purpose was the "master's studio," to use a term employed by artists. A master of science, who was at the same time a master of instruction, trained pupils, who learned under him both how to do scientific work and the art of teaching it, and then imparted these things to others. This is the only kind of university-teacher's-seminary possible. So the philologists and historians trained their pupils to be teachers, the Wolfs and Ritschls, the Rankes and Waitzes; their seminars and lecture rooms were also their university-seminary; they taught without ever mentioning "university-pedagogics." And in the same way the great natural-scientists, too, were teachers of university-pedagogics, and

likewise, the professors of medicine, law, and theology. The clinics, the laboratories, the exercises, the lecture halls, these are the institutes or laboratories for university-pedagogics. All improvements in instruction and its methods began here; what a master discovered and practised, his pupils saw and imitated or improved upon, if they could. And others were incited to emulate him by the spirit of competition, which proves truly beneficial in this case, and by the migratory habit of the German students; they follow an efficient teacher to his new sphere of action, and the universities which are outstripped are soon deserted, at least in a given field.

Under this system German university instruction has prospered hitherto and will continue to prosper in the future. Whoever desires to become a master in any field of academic instruction, will, if he takes my advice, go, not to the "seminary for university-pedagogics" (which may, God willing, arise at some future time), but to the school of a master, and if he has the chance, to the schools of several masters whose methods differ, so that he may be more likely to hit upon what happens to suit him best. Nor will it be to his disadvantage to go to a foreign country and to see how the same problem is solved in France or England or America. But he will not go to an institution where "the method of university instruction is taught in a practice school."

Besides the essential necessity of studying under a master, it is also possible to use the copious literature on university problems. Of particular interest are the views of masters in one's own line of work on the method of instruction. There is a considerable literature of this kind, but it is somewhat inaccessible, being found scattered in academic orations, in forgotten memorials and reform-treatises, in personal memoirs and biographies. It would be a grateful task if some scholar would collect and sift these data and prepare them for use, each field, of course, for itself. A methodology of the philological or mathematical, natural-scientific or medical university instruction, *ex fontium locis contexta* as suggested, would certainly be welcomed by young university teachers. Or rather they ought to welcome it, for it is not to be denied that many among them care too little for the form of instruction, resting, as they do,

in the belief that whoever knows his subject can teach it without further trouble. It would also be a deserving task to write the history of university instruction with special regard to methods of instruction. Here, of course, after the presentation of some general matter a division of labor would have to take place, for only a mathematician could write the history of the methodology of mathematical instruction, only a philologist that of philology, and only an anatomist that of anatomy. It would therefore have to be a collection of treatises similar to the work on German universities prepared for the Chicago Exposition, which, by the way, contains some preliminary work along these lines, though very little, it is true, since its aim was to give a description of scientific achievements rather than of university methodology.

And in addition to such a work a journal would be a deserving enterprise in which the masters of a subject might freely exchange their views and discuss all the problems of academic instruction. To be sure, such organs have hitherto always had to contend against the insuperable indifference of the public of which and for which they are written. This is due to the inevitable division of labor in the field and also to the inevitable union of research and instruction. And so the different specialistic journals have, for the most part, had to perform this function incidentally, as best they could. It would be a deserving act on the part of the ministries of instruction in Germany if they were to furnish the financial means for a journal or library, which would render accessible and preserve for permanent use the important treatises or fugitive addresses that are now scattered and remain unknown.

CHAPTER III .

FREEDOM OF TEACHING

1. *Nature and Need.* Freedom of teaching (*Lehrfreiheit*) is the pride of the German university. It is intimately connected with the intellectual freedom which constitutes such a marked feature of our national life. When other nations boasted of their power, their dominion, and their free institutions, the German people—whatever great cause it may have had for dissatisfaction in other respects—prided itself upon its intellectual freedom. When it was denied the privilege of free and vigorous action, it found compensation and consolation in independent thought. And this free thought had its seat especially in the universities. While thought and research were hampered by ecclesiastical and political restrictions or by the *vis inertiae* of corporative organization and the pressure of narrow-minded public opinion in the universities of other countries, which boasted of their political freedom, the German university rose to be the citadel of free thought, of thought bound by no dogmas and limited by no norms beyond those established by reason itself. Hence the pride of the German in his universities. Hence the sensitiveness on the part of wide circles to any pressure at this point. The German endures many restrictions of his personal liberty with great and, to strangers often astonishing, patience; here, however, he is, and we may say it to his credit, sensitive. The freedom of thought, research, and teaching is the jealously guarded palladium of the unwritten constitution of the German people.

"The German university," wrote a prominent American philosopher and pedagogue, Stanley Hall, more than a decade ago, "is to-day the freest spot on earth. . . . All the old forms and laws of beliefs men had lived by were upturned and every possibility of thought was explored in quest of new,

deeper, more ineluctable foundations. But the most perfect liberty was never more triumphantly vindicated by its fruits than amidst all this ferment. Shallow, bad ideas have died and truth has always attained power. While weak men have passed through a period of confusion and perhaps some have grown indifferent and sterile, strong natures have only struck deeper root." ¹

May the time never come when the German universities will have reason to blush at these words.

Freedom of teaching follows from the nature of the German university as it has developed since the eighteenth century. It is no longer, as formerly, the function of the university teacher to hand down a body of truth established by authorities, but to search after scientific knowledge by investigation, and to teach his hearers to do the same. Science, that is the fundamental principle, does not exist as a fixed and finished system. It possesses a stock of truth, but not only is this infinitely far from embracing the entire field of possible knowledge, but it is both possible and necessary to subject its title to constant criticism. In science there is no statute of limitations nor law of proscription, hence no absolute property right. It consists solely in the constant and new appropriation of old truths and the acquisition of new knowledge; it exists only as a constantly repeated attempt to solve an endless problem, in which every seemingly settled point can be again called in question by the presentation of new evidence. Hence it follows that truly scientific instruction, that is, instruction that shall lead to scientific thinking and investigation, can be conceived only as absolutely free. Instruction that is hampered is not scientific. For the academic teacher and his hearers there can be no prescribed and no proscribed thoughts. There is only one rule for instruction: to justify the truth of one's teaching by reason and the facts.

It is not to be denied that such an unlimited freedom has its dangers. I do not mean chiefly the greatly feared dangers to the established political and ecclesiastical institutions, but internal dangers to science and teaching themselves. This freedom does not give us any guarantee that what is untenable, strange, and absurd will not also claim acceptance. If the

¹ *The Pedagogical Seminary*, i., pp. 7 ff.

academic teacher possesses the freedom to present only that and all that which he himself considers true and reasonable, the possibility is, of course, not excluded that he will not only not accept new truths, because his own settled views seem more reasonable to him, but also that he will reject existing truths in order to substitute for them his own inventions, which flatter his vanity by reason of their originality. This occasionally happens in all sciences. The jealously claimed independence of thought may deteriorate into a restless passion for innovation, particularly in the fields in which the subjective element has the greatest scope, in philosophy, theology, and the mental sciences in general, which are necessarily far removed from the certainty and exactness of the mathematical-natural-scientific branches. There can be no doubt that a great many foolish opinions are offered by German professors which have their origin partly in the mere mania for contradiction and originality. So in philosophy. Every new docent takes a pride in having his own system and in setting up something new, even though it be false and shallow, instead of "the old truth," of which Goethe once spoke. A more or less arbitrary principle is chosen, new paradoxical notions are deduced from it, and a system constructed out of them. Then pupils are enlisted and drilled in the new ideas; there is no absurdity for which, if only it appears in the form of a system, a number of pupils cannot soon be found in Germany, who proclaim it as the newest truth and call it the greatest thing of the day in newspapers and periodicals. So the creator of a new system, the founder of a new school, is born, his name gets into the "history of philosophy" and is enrolled among the immortals.¹

That is the price for freedom of teaching, not a cheap price, but it must be paid; freedom and danger cannot be separated. There would be but one protection against this danger, and that would be the acceptance of the medieval Catholic principle of

¹ Goldschmidt (*Rechtsstudium*, p. 121) shows that this phenomenon is not unknown in jurisprudence: he speaks of an "inordinate ambition to produce new or seemingly new theories; of a certain mania, especially on the part of younger scholars, to bring real or alleged thoughts into the market as quickly as possible; to expand particular, perhaps helpful, observations into monographs on general doctrines, and then again to base the big book on entirely new principles."

the restriction of teaching. This step the German university cannot take, however, without abandoning its premises, without renouncing its glorious past and its proud claim to the title of pathfinder of truth. And it may make us willing to accept the inevitable reverse of academic freedom if we remember that the free presentation of individual thoughts—however questionable their worth may be in a particular case—has more life in it and awakens more life than the prescribed presentation of transmitted thoughts.

Helmholtz once pointed out how important it was that all fields of scientific research be surrounded with an atmosphere of free thought, in which alone men might have the courage to strike out new paths to new discoveries in the land of truth. He shows that Germany won the leadership in the study of organic nature, in physiology and medicine, for other reasons than the indefatigable industry of the German scholar and his strong idealistic bent: "The crucial point is that we are more fearless of the consequences of the whole truth than any other people. In England and in France, too, there are distinguished thinkers capable of working with their full strength in the spirit of the natural-scientific method, but thus far they have almost always been compelled to yield to social and ecclesiastical prejudices, and have not been able to express their convictions openly without endangering their social influence and their efficiency."¹

2. *Boundary Disputes and Conflicts.* As a general thing freedom of teaching is the acknowledged and undisputed principle of the German universities. In most fields of research it is absolutely unimpeached; in the natural sciences and medicine, in the mathematical and philological disciplines no one would dream of imposing upon research and instruction either positive or negative prescriptions. Only at certain points is the attempt occasionally made to restrict the freedom of teaching, if not in principle, at least in practice. This is the case where scientific research comes in contact with the public authorities, the state and the church, where, in

¹ Helmholtz, *Populäre wissenschaftliche Vorträge*, Number 2, p. 210. From the address on the Aim and Progress of Natural Science, delivered at the opening of the meeting of Natural Scientists at Innsbruck, 1869.

other words, it deals with religious, political, and social affairs. Theology and philosophy, the political and social sciences, sometimes encounter such opposition and feel compelled to defend the freedom of teaching. I shall take up the different fields and say a few words about each. Let me, however, preface my statements with some general remarks.

The nature of the conflict is everywhere the same, it is the conflict between the theorist and the practical man, between the philosopher and the politician, we can also say, between the two essential phases of human nature itself, between the intellect and the will. The will, which reveals itself also in historical organisms as the will of self-preservation, demands, through its representatives, the politicians in the state and church, settled conceptions and convictions as the precondition of fixed institutions, and incontestible principles as their foundation.

The intellect, on the other hand, and its representatives, the philosophers and investigators, do not recognize anything as absolutely established, or as beyond criticism; even the principles are subject to doubt, there is no limit to criticism and the progress of new ideas. Error alone is dangerous and pernicious, never the truth. If the institutions are built upon error, they must simply be changed and placed upon new foundations.

The conflict is bound to break out again and again at this point. All sciences which investigate the foundations of historical institutions must encounter the resistance of established custom. Custom expects and demands of them that they recognize and prove its reasonableness and necessity. In case they decline, their work becomes subversive of the established order, and interference with science seems all the more permissible and justifiable because the institutions for scientific research are not only erected and supported by the political authorities, but are called to train the future officials of the state and the church. How then can they be allowed to shake the foundations of the very institutions which it is their office and function to preserve? ¹

¹ This view is carried out in my *Ethics*, fifth edition, vol. II., p. 212; English translation, pp. 698 ff. In a valuable lecture by G. Kaufmann, *Die Lehrfreiheit an den deutschen Universitäten im 19. Jahrhundert*, 1898, the most notable conflicts of the authorities with scientific freedom in the last century are discussed.

Before I attempt to mark the boundaries between these claims for the different fields of research, I should first like to call attention to one point. All the sciences which are exposed to conflict with the representatives of practical institutions, have a peculiar character; they reflect the volitional nature of the investigator, even in his scientific work. In the mathematical-natural-scientific sciences the intellect has absolute control. In the sciences, on the other hand, which have to do with human historical life, subjective and personal demands inevitably influence thought. The entire personality of the thinker and investigator is steeped in the historical life of his people. He takes an interest in things, he approaches them with feelings of love and admiration or aversion and contempt, and these feelings influence his judgment, they directly affect his judgment of value, but they are also apt to color his judgment of facts, for feelings determine our ideas and perceptions of things and their relations.

And then a final factor enters. This inner and personal interest in the world is in a certain sense an indispensable condition of research. "In order to understand the poet we must go into the poet's country." The same may be said of religion and morals, law and politics; whoever wishes to understand these things must experience them in himself. But he can directly experience them only in this or that particular form. He cannot experience religion in general, but only a particular concrete form of historical religion, and so, too, he cannot experience moral or political life in general, but only the life of a particular community to which he belongs by birth and education, rank and occupation.* In order, therefore, to understand this world, he will necessarily be biased; as a mere, pure, mathematical intellect he would have absolutely no interest in it; it must be experienced in order to be understood.

Hence, the institutions and their representatives conclude, since the perfect impartiality of a pure intellectual judgment is by the very nature of the case impossible here—it would be identical with indifference and inability to understand—it is a fair demand that whoever engages in scientific research, whoever wishes to instruct others, especially our future servants, concerning our nature, should be on our side and conceive and

interpret us with sympathetic interest. Let our enemies be occupied in the business of bringing our deficiencies to light, perhaps this, too, is a necessary business; but here where we desire to be understood, we need friends who will point out the good and the positive in us, and show the reason that is in us.

Such is the conflict. Let us now follow it into the particular fields and endeavor to find the principles on which to settle it.

3. *Theology and Freedom of Teaching.* Here the conflict is most likely to break out and become most acute, because the church is itself an institution of learning, and, as a church, assumes to be in possession of the truth. It formulates the truth in the dogma.

The Catholic church has created a particular ecclesiastical organ for ascertaining the truth, the infallible ministry, whose definition of the doctrine is placed beyond all criticism by the constitution of the church. The function of a teacher of theology can accordingly consist only in the scientific arrangement and proof of the truth established by the ministry in the dogma, to defend it against attacks, to strengthen the future ecclesiastics in their belief in the dogma, and to provide them with the weapons of polemics and apologetics. There is, in the very nature of the case, no room here for free research as a means of determining and developing the doctrine itself; obedience is the first duty even of the university teacher. The Catholic church has, as was already pointed out (p. 141), actually enforced this claim, and no radical conflict is therefore possible here.

*In the field of Protestantism things are different. Here too, it is true, the church claims to possess the truth in the dogma, and consequently demands obedience, but without complete success. The teachers in the Protestant theological faculties assume a fundamentally different attitude: they do not aim to be servants of the church, but first of all servants of science, servants of the church only through science. The Catholic theologian bears the same relation to the dogma as the jurist to the positive law, he develops it into a conceptual system. The Protestant theologian, on the other hand, considers it his func-

tion to develop and extend the faith, in the doctrine of faith. Since the church, however, possesses, not an infallible ministry, it is true, but yet a body of doctrine fortified by creeds, we have here a constant possibility of conflict. The representatives of the church demand subordination to the doctrinal symbols as the standards of instruction, declaring that it would be absurd to demand this of the clergy if it were not likewise and especially required of their teachers at the university. The clergy, it is held, will be exposed to intolerable inner conflicts if they are abandoned to the influence of any doctrine you please at the university, and then required, upon entrance into office, to accept the church dogma as a fixed standard of faith and instruction.

The argument seems convincing, but closer examination shows it to be untenable. The office of the clergyman and that of the university teacher differ in their nature. It is one thing to edify the congregation on the basis of a presupposed common faith, another, to subject this faith itself to scientific investigation. For the latter function there can be no external standards, possessing the force of legal axioms, on Protestant ground. The Protestant churches have no organ for making dogmas and can have none. Protestantism, as has been said before, is in its origin an individualistic reaction against the institutional religion of the Roman church, a reaction supported by a powerful religious personality. It cannot deny its origin and hence is unable to create dogmas as binding norms. That was the opinion of the reformers: not human ordinances, but the word of God alone is the source and standard of faith. The "word of God" is, however, not embodied in a system of definitions and dogmas. It is, as we begin to see with increasing clearness, imbedded in a long series of writings of the most diverse contents and character, which are so many evidences of progressive historical life; or rather it is nothing but the meaning of this life itself. And therefore free scientific research is really possible here; it will aim to understand the nature, origin, development, and goal of the religious life of our civilization. Since historical life itself is not complete, religious life, which is its soul, cannot be complete but may develop into higher forms.

To the character of theological science in this field, the character of university instruction will have to correspond. It cannot be the aim, in the professional training of the Protestant clergy, to teach dogmatic proofs for the truth of the doctrine, but merely to introduce the student into this historical life and help him to understand its progressive development. The more deeply he is immersed in this stream, the better equipped will he be to act as a guardian of souls and as a spiritual adviser amid the extremely difficult and complicated relations existing in the spiritual life of our times. Not as a priest, not as an official of the church will he make his influence felt, but only as a living personality. All the more necessary is it that he become familiar with the life and thought of his age on the one hand and, on the other, that he rise above it through a deeper historical insight and through a consciousness, guided by higher ends, of that which is to come because it ought to come.

One restriction will, however, be imposed even upon the freedom of the professor of theology. He must be rooted in the soil of this historical life; he must be in sympathy with the great religious event of humanity which we call Christianity, he must experience it as the most valuable content of our life, to be realized more and more completely by us. A person who fails to do that, who sees nothing in Christianity and its literary creations, nothing but an outlived form of superstition, or who has perhaps been convinced by Nietzsche that Christianity represents the triumph of slave-morality, and is the radical curse of Western civilization, may continue to believe in his vocation as a historical-anthropological philosopher of religion or a reformer of humanity, but he cannot believe in his mission as a teacher of theology. As an honest man he will have to lay down his office, in case this conviction afterward takes possession of him, so that no one may be deceived with respect to his attitude.

And still another demand may be made of the professor of Protestant theology, that he place himself on the side of Protestantism, and do it willingly, that he be ready to build up the religious life of the community upon this basis. Whoever, instead of building, desires simply to tear down, whoever looks upon the Protestant church either as a form of apostacy from

the Catholic church that ought to be abolished, or as an obstacle to the elevation of humanity that ought to be absolutely destroyed, cannot, as an honest man, retain membership in a Protestant theological faculty. This faculty happens to occupy a definite historical position with respect to these questions, which those who enter it accept as the basis of their activity. A man who cannot tolerate the restriction will do well to keep out of the faculty and use his freedom as a citizen in laboring in the interest of his own views.

Is the theological faculty therefore without that freedom from bias in research which we are wont to regard as the precondition of membership in a university as a scientific institution? In a certain sense, yes. Its scientific work is not unbiased in the same sense as that of the medical or mathematical-natural-scientific faculty. This is due not only to its history and its position amid the social problems, but mainly to the fact already mentioned that certain judgments of value underlie its work as well as its instruction, which are not derived from scientific research, but arise out of the affirmation of historical and personal life.

Mathematics and physics can exist as unprejudiced sciences, if we except the belief in the validity of logic, simply because their objects have no connection with the heart and will, but exist merely for the intellect. On the other hand, judgments of value, posited by the will itself, which can not be proved to the intellect, form the starting point in ethics. Similarly there are in the historical sciences, in the sciences of religion and the church, law and the state, judgments of value, having axiomatic character, which cannot really be proved to the understanding, positive and negative judgments of worth which are conditioned by the historical and personal attitude of the investigator, and which succeed in influencing him in the selection as well as in the conception and treatment of the subject. An inhabitant of Sirius, coming down upon the earth, could examine, classify, and psychologically explain the different religions of the earth-dwellers with the same objectivity with which the mathematician regards his lines and angles; an earth-dweller will never be able to do it. Immersed in this historical life, he takes an emotional interest in its products; he cannot get away

from it, he cannot make a pure intellect of himself here. He can rise above blind hatred and above blind love, but he cannot eliminate these feelings altogether. And even if he could, he ought not to do so; it would mean the annihilation of his personal life.

Such subjective-personal limitations exist in all fields of knowledge which have to do with historical and personal life, and cannot be eliminated. Hence honesty demands that we admit them and that we do not plead absolute freedom from bias. To be willing to accept as fact everything that honest research considers historical fact, and likewise to be willing to accept everything that unprejudiced judgment regards as a consequence of necessary thought, and finally to be ready to recognize and accept whatever the moral judgment absolutely looks upon as a higher value and as a higher standard of value, that is the only freedom from bias to which the investigator in these fields can bind himself. But he cannot subscribe to a freedom from bias which implies absolute indifference to the objects of investigation. The desire to understand, preserve, and elevate this historical life, that is not only the permissible, but also the necessary presupposition from which the Protestant theologian, no less than the Catholic, starts out, and which his hearers have a right to expect from him.

But for the rest, no restriction is to be placed upon his freedom of investigation and instruction, as happens in the case of the Catholic theologian. This is in harmony with the nature of the German university and the essential principle of Protestantism. Faith here does not depend upon an external authority, and hence instruction cannot be based upon it. Between the creed of the church and the teaching of the theological faculties the only possible relation is one of voluntary agreement and not of absolutistic subordination, the attitude which follows from the principle of absolute doctrinal authority in the Catholic church. Of course the Catholic attitude is simpler, but the simplest is not always the best and the surest. The living organism is not simple, the mechanical object is simpler than the organic. In the state, too, absolutism is simpler than the constitutional monarchy, but it has become impossible, and the state now rests upon the voluntary, not forced, agree-

ment between two factors. A somewhat similar relation exists between theology and the church in Protestantism; they have grown up together, often in conflict, but the friction is beneficial to both.¹

Is that a menace to the faith of the future clergy? To their faith in an infallible church and in a fixed body of doctrine it undoubtedly is. But does it threaten their religious faith? Perhaps. They cannot, however, get away from doubt here, they find it everywhere, even at school; they will also find it in the parish; how can they escape from it at the university? There is nothing left but to pass through doubt to a personally experienced faith in God, the God who has revealed himself to us in Jesus, as he can reveal himself to men in a man. The more deeply one has been steeped in doubt himself, the better leader will he be for a world steeped in doubt. But if he remains fixed in doubt, if he does not reach a personal certainty, which impels him to testify and preach, it is better for him to choose another calling while there is still time. The all-important thing is that he have a personal, and not merely a prescribed official, faith. The Protestant church must make up for what it lacks in doctrinal authority by the sincerity and truthfulness of its servants.

4. *Philosophy and Freedom of Teaching.* I shall add a few statements concerning the science which bears an intimate historical and material relation to theology, that is, philosophy. Its freedom to teach is likewise occasionally contested and by the same opponents who demand a binding standard for theology. From philosophy too they demand harmony with the doctrines of the church, or at least the exclusion of certain forms of thought which are condemned by the church. In the ultra-montanistic press and in the speeches of the parliaments and diets we hear the constant complaint that an "atheistic" philosophy is tolerated at our universities, which makes a business of undermining religion and corrupting the youth. The lecture rooms of the universities, it is maintained, are the nurseries of revolution, social-democracy, and anarchism, and it is futile to combat these evils outside so long as we do not

¹ Compare an excellent lecture by W. Kahl, *Bekennnisgebundenheit und Lehrfreiheit*, 1897.

attack the very seat of the disease.¹ There is also a tendency among some Protestants to make such charges and to engage in the business of alarmists.

I do not intend to investigate these charges, or to find out whether or not "atheistic" philosophy is taught at German universities. As everybody knows who has even a slight acquaintance with the history of philosophy, the characterization of a system as atheism has, ever since the trial of Socrates, been the constantly repeated and therefore somewhat hackneyed method of discrediting a philosophy with the authorities and the masses. Nor do I intend to inquire whether political discontent is the result of unorthodox thinking and political orthodoxy the result of religious orthodoxy. I simply desire to point out that the demand of freedom from bias strictly applies to philosophy, that a philosophy that has a goal set before it, which thought must reach or dare not reach, is nothing, at least not philosophy.

Philosophy is nothing but the reflection of reason upon itself, the critical examination of the ultimate presupposition of all knowledge and willing, and likewise the attempt to explain the nature of reality and its meaning. Hence it follows that it cannot accept any unproved assumptions, not even the assumptions of logic. Reason examines even these and justifies them by convincing itself that the logical principles constitute the essence of reason. The same is true of the ultimate principles underlying the judgments of value; the rational will expresses itself and its nature in them. On the other hand, the exposition and interpretation of reality is a business that is subject to constant examination and improvement all along the line, down to the principles themselves. All sciences are constantly adding new facts and views to the knowledge of the world, from which alone it follows that there can be no final and immutable philosophy, that it must always be ready to re-examine every point that seemed settled, in the light of the new facts. Moreover, the conceptions of what constitutes the meaning of life

¹ As an example of this kind of denunciatory eloquence as well as of the way in which the "pious lie" is employed, examine a little treatise written by Nic. Siegfried, *Vom Atheismus zum Anarchismus, Ein lehrreiches Bild aus dem Universitätsleben der Gegenwart*, Freiburg, 1895.

and reality are also subject to change. Hence every age is confronted with the problem to repeat the attempt of solving the great riddle of reality by the means at its disposal. The attempt will be the more successful, the more it learns from the attempts of former times; the more faithfully a philosophy utilizes the results of past thinking, the more vigorous and fruitful it will be. But one thing no philosophy can abandon without abandoning itself, the right, namely, to examine and modify all traditional conceptions when the facts or the more highly developed consciousness of its own nature demand it.

As a matter of fact; however, philosophy itself is not without its presuppositions, presuppositions which are rooted in personal and historical life. The philosophy of an earth-dweller will be different from that of an inhabitant of Sirius, that of an Englishman different from that of a Hindoo. Philosophy must be without bias only in the sense of granting absolutely no presuppositions the examination of which it does not consider permissible, nay, necessary. Whether or not there can be knowledge at all, whether or not there can be any general principles for determining values, whether or not life and reality really form a cosmos and have a meaning, there is not a single question here that cannot be put, no question that might not as such be denied as well as affirmed. In this sense philosophy is free from presuppositions, the absolutely unbiased science, because it is its function to examine the presuppositions of all the rest. Reason is here wholly dependent on itself, determined to accept nothing as true that is not grounded in reason itself. That such a science cannot permit prescriptions and restrictions to be imposed upon it, is obvious. It would, as Kant once said, "be very absurd to expect illumination from reason and yet to prescribe to it beforehand what the illumination shall be." The same thing applies to philosophical *instruction*. It ceases to be philosophical when it does not depend solely upon the consent of reason, and when it does not appeal to the independent, perfectly unbiased reason of the student. It ceases to be fruitful as soon as this is no longer the case; it will have influence only in case the student is sure to receive in the lecture the untrammelled expression of the teacher's independent convictions, based upon his best knowledge and belief. Professor comes from *profiteri*; the

word calls for an open confession of a personal conviction, in no field more than in philosophy where the subjective and personal element plays a more important part from the very nature of the science. If the teacher is obliged to hold certain views, or at least *not* to hold certain views, the student will place little weight upon the arguments presented; of course there will be arguments if once the propositions are established. What should we think of a critical-historical investigation whose results had been prescribed to it? In such a case everything would simply depend upon the teacher's lawyer-like cleverness. The same holds here: a philosophy that degrades itself by consenting merely to find arguments for a theory prescribed by external authority, sinks to the level of a sophistical art of proving everything possible, for it might have pleased the authority to prescribe the opposite view. The effectiveness of university instruction in philosophy depends upon the student's belief that truth is the sole aim and not the proof of officially prescribed and quasi-officially desired or at least permitted views. He wishes to know what are the personal convictions of a sincere and serious man with respect to the great problems of life and the world to which such a man has devoted deep and serious thought. What functionaries have been ordered to say about these things he knows well enough already.

The fear is expressed that our young men will be misled by absolutely unfettered teaching and thrown into confusion. This belief rests upon the great misconception that our students come to the university with the child-like faith in what is handed down to them in the religious instruction of the schools as settled truth. Everybody who is even slightly in touch with the actual world knows how far removed we are from such a state at present. To be sure, nothing is said of these things in the certificates which are presented for entrance; in them it is perhaps attested that the student has thoroughly familiarized himself with the tenets of the Christian religion. As a matter of fact, we meet with the most sweeping doubts, even and especially in the schools, with doubts not merely in specific doctrines of the faith, but very often with absolute scepticism, and not seldom dogmatic atheism and materialism. The higher classes in our gymnasia perhaps furnish the most numerous and

most zealous readers of the Büchners and Haëckels: the charm of these books is so great here because they have the value of forbidden fruit.

Such students are not satisfied at the universities with a new edition of an approved scholastic philosophy. They can be brought to a freer and deeper conception of the ultimate problems only by a philosophical instruction that does not ignore doubts, that has no goal prescribed for it, that considers the facts alone and listens only to reason, that is ready to accept every solution of these problems that is found necessary, upon the most impartial examination. If philosophy is taught in this way at our universities by a man who is not handicapped by the suspicion which at present attaches to all prescribed or quasi-official views, he may succeed in convincing his hearers that reality does not stop where the panting wisdom of the *litterati* of materialism stops. And if he succeeded merely in arousing a feeling of reverence for reality and for the efforts which have been made by great and profound thinkers to interpret its secret, that would be something. But the freedom of teaching is the necessary precondition of all this. When only one kind of thinking is allowed, it is naturally suspected of not being able to withstand the force of argument, and whoever advocates it is at least exposed to the doubt whether he would have advocated it of his own accord and without pay. An idealistic philosophy is especially deeply interested in seeing that other schools are not deprived of the possibility of asserting themselves. Every restriction of academic freedom would encourage the suspicion that it was insincere, and rob it of its influence.

From this standpoint we are enabled to pronounce judgment upon "Catholic" philosophy, which is taught in ecclesiastical institutions and is also officially represented in some German universities. The philosophical conception of the universe which has been presented in the system of Thomas Aquinas has of course absolutely the same rights as any other philosophy. But what gives it its peculiar position is that it is at present almost a prescribed philosophy. The recommendation of the Thomistic philosophy and the rejection of other systems, for example of Kant's, by explicit declarations of the suprem

authority, confer upon the representatives of this movement a position scarcely less exceptional in the German universities than that occupied by Catholic theologians. It would therefore now be appropriate, as was stated before, to have this philosophy presented by a member of the Catholic theological faculty.

5. *The Political and Social Sciences and Freedom of Teaching.* The representatives of the sciences which study political and social life also occasionally come in conflict with the ruling powers and are accused of "heterodoxy." There is, in reality, no real orthodoxy here. The state has no canonical dogma concerning its nature, functions, and rights, like the church. It is not an institution of learning, but a sovereign power. Nor have we an official doctrine of society and its functions. Instead, the party that happens to be in power proclaims its own doctrines as orthodox, and characterizes every doctrine antagonistic to it as false and dangerous. And so it endeavors by the power of the state to keep out or dislodge the "false doctrines," at least from public institutions of learning. The arguments which it employs are always the same. The false doctrines undermine the security of the state and society; these and the authorities representing them therefore owe it to themselves to oppose such doctrines, for the right of self-preservation is here also a duty. Least of all can false doctrines be tolerated among officials; correctness of thought is the first duty of the official, for he has to represent the authority of the state. And it is a double duty for the academic teacher. In the first place, he is himself an official, and in the second place, it is his function to train officials, which means, to instruct them in the right views of the nature and function of the state. In case he is not willing to do this, the authorities have the right and the duty to remind him of it, to censure him, and if he remains obstinate, to remove him, or at the very least to place a teacher holding the correct views by his side to avoid dangerous misunderstanding.

Our answer is that if there is to be a science of the state and society, it must, like every science, spring from the free investigation of the facts. A theory of the state and society that has its results prescribed, would have no theoretical value whatever,

but at best only a technical value, namely as an instrument of government to keep itself in power. To the parties science is but one of the means of keeping themselves in power by influencing public opinion. With the truth as such the parties have nothing whatever to do; if it is for us, very well, if it is against us, away with it! That is the maxim of every party as a party, which, of course, it does not confess and cannot confess. "Science" would manifestly lose its value even as a means of power if it appeared as the dogma of the party in power. It influences the opinion of men only so long as it seems to be an independent product of the intellect. The dominant party will therefore always desire to have a form of science that is really dependent, but publicly boasts of its independence, just as it is wise for a prince who proposes to embrace Machiavellianism, according to Voltaire's witty remark, to begin by writing a book against Machiavelli.

This is the way the matter stands for the parties. For the people as a whole and the state as such, meaning by the latter the permanent embodiment of its impulse of self-preservation, which is superior to the parties, the case is different. The people really care for the knowledge of the truth, at least in so far as the proper conception of reality constitutes the basis for properly influencing reality. A party may be interested in not having the truth prevail, but a people cannot as such have an interest in the preservation of false conceptions. Its ability to live depends in no small measure upon its doing that which is necessary from a proper knowledge of the actual conditions. And hence the people and the state, in so far as the latter represents the people, can have no desire to place obstacles in the way of an honest search for truth in the field of politics and social science, either by forbidding or favoring certain views.

We might make the matter clear by Socratic inductions. Is it not true that when any one, anxious about his health, consults a physician and places himself under his care, he does not prescribe to him what shall be the result of the examination, and does not tempt him to see or to say anything not in accord with the facts, either by rewarding him for favorable statements or threatening him with punishment for unfavorable ones? If any one should act like that, we should call him a fool. And

when the master of a ship takes a pilot on board, he does not mark out for him the course to follow, but leaves him to steer the ship and turn the helm; all he does is to determine the destination of the vessel. Well, the same holds here. When a people appoints experts to produce scientific knowledge of the nature of the state and society, their historical evolution and present condition, it is foolish for it to prescribe to these men what definitions and propositions they ought to employ in order to reach their results, just as foolish as it would be to prescribe to the statistical bureau the figures to be obtained, to insist upon figures, let us say, giving favorable evidence of the progress of the population and of its wealth.

If the results of statistics were decreed by the state, all enumeration and calculation would, of course, be superfluous or rather a mere illusion for the purpose of deception. And the same thing is true of political economy and the general theory of the state; it is their function to form general conceptions adequate to explain reality as it is. If now these conceptions are decreed by authority or their formulation influenced by favor or threats, these sciences sink to the level of mere sham-battles, arranged by a party for the purpose of keeping itself in power. The people as a whole would have no interest in them, none except to get rid of them. What the people needs, if it needs doctrines at all, is incorruptible, perfectly disinterested seekers after the truth; concealment and deception can only lead to ruin. And such men it will appoint to teach. The instruction of officials and statesmen in these sciences can have no value whatever, unless it leads to the most impartial knowledge of reality, even though this knowledge should not produce satisfaction with existing institutions. To content oneself with fancies and deceptions is no wiser than to strive to enrich oneself by adding ciphers to the figures in one's account-book.

Theoretically it will not be possible to reach any other conclusion. Still there are practical difficulties. Not only is the state always represented by persons who are in some way or other influenced by party interests and party views, but even the investigators and teachers as individuals stand in some relation to the political or social parties, by reason of private

interests and personal feelings, descent and intermarriage, etc. They can at best vouch for their honest intention to see things as they are, but they cannot wholly get rid of the personal factor and the subjective character of the concepts and judgments conditioned by it. Under these circumstances the problem will always leave a remainder *in praxi*. But the principle will hold: a people is interested in the truth alone, and there can be a science of these things, only in so far as the influence of personal interests upon the results and judgment of the investigator is eliminated. If, therefore, the business of research is to be made a public function, the political powers will, so far as they represent the interests of the whole, have to observe strict neutrality towards the results of research.

Here, too, however, it will be necessary to place one restriction, if not upon the thinker, at least upon the teacher appointed by the state and supported from the funds of the people, the same restriction which we placed upon the professor of theology. Just as the latter must assume a positive relation to religion and the church in general, the former must assume a positive relation to the people and the state. A person who occupies the position of an enemy to this nation, not striving for its welfare, but for its ruin or the decline of its power, or assumes a hostile attitude towards the state as the historically developed institution of the people, aiming at its dismemberment and destruction and not at its preservation and improvement, cannot as an honest man accept an office and a commission from the hands of the people or the state. The implicit or explicit assumption is that the official desires the preservation and welfare of the community. If the pilot taken on board should use his position to steer the ship against the rocks and into shoals, he would be guilty of treachery; so would the man who used his official position to betray the interests of his people, or to drive the ship of state upon the rocks of civil war.

Or suppose that a man had been convinced by his own reflections upon the nature of the state or by the eloquence of a Tolstói, that the state as an institution of force was an evil, and ought to be destroyed. That, too, would unfit him for the office of a teacher of political science just as it would unfit a person to be a teacher of law if he looked upon the positive law as a

foolish burden and a plague—always provided at least that the state is not inclined to abrogate itself and the law in case theory demands it. The teacher will, therefore, have to recognize that there is a reason in these things, and it will be his first task to see and to show the reason that is in them. Then he may also point out the distance between the reality and the ideal, and, if he can, the way to approximate the ideal. The man, however, who can find absolutely no reason in the state and in law, who, as a theoretical anarchist, denies the necessity of a state and a legal order, having the power to compel, not only for an ideal dream-world, but for this work-a-day world, may try to prove his theory by means of as many good arguments as he can, but he has no call to teach the political sciences at a state institution. And no state would be willing to appoint him to such an office or be able to tolerate him in it, however thoroughly he may be convinced of his vocation for it. Just as there can be such a thing as supersensitiveness, there can be supertolerance. We can neither justly demand nor reasonably expect that the state should voluntarily expose itself and its legality to whatever insults the theorists appointed by it as teachers may choose to offer. Such unlimited academic freedom would manifestly be conceivable only as an evidence of the state's absolute contempt for the professor's teaching; it would be placing it on a level with the pratings of an anarchistic demagogue which the state does not prevent because it regards them as utterly insignificant and harmless.

From this standpoint we may also judge of the state's attitude toward the academic presentation of the political and social sciences in accordance with the principles of the *social-democracy*. So long as the party advocates a theory hostile in principle to the state as such, claiming that the existing state is nothing but the product of the selfishness of the dominant parties, an institution for the oppression and exploitation of the "people," that its so-called justice is nothing but a peaceful form of gag-law, that the army is an instrument for the forcible coercion of the masses, that the goal to be sought is political power and that this is to be employed in destroying class distinctions and abolishing the state as such, the compulsory instrument for maintaining social oppression; so long as the social-democracy

advocates these theories, so long as it remains radically hostile to the state, hostile to this particular state and to the state in general, it cannot be permitted to teach the political sciences in state institutions. A state that will permit such theories to be taught, as "the results of science," in the lecture rooms of the universities established by it, and will allow the teachers of the political sciences employed by it to point out the worthlessness of the state as such, or of this particular state, as a scientifically proved fact, will be looked for in vain. The existence of such a state would simply prove that the authorities regarded the lectures of professors as harmless and insignificant, and considered it beneath their dignity to pay any attention to them. So long as the state takes the universities seriously, such a form of political science as has been described will be impossible in its institutions of learning.

This, of course, does not mean that the state should absolutely suppress all attempts to formulate such theories. Nor do I deny the need of a social-democratic party and of its criticism of existing political institutions. Though it may often shoot far beyond the mark, it has given rise to wholesome reforms in our legal and social institutions, and will continue to do so in the future, the more clearly it keeps in view, as a political party should, the most immediate positive ends and allows the ultimate ideals to take care of themselves. All I assert is this: The state cannot hand over the business of teaching the science of the state to men who show no deeper appreciation of the inner necessity of historical products, and who have no more respect for established institutions than the platforms, literature, and press of the social-democracy express. The state will permit such men to gain followers for their doctrines wherever they choose, but it cannot appoint them as the authorized leaders in the science of these things.

It is also to be added that so long as the social-democracy boasts of being a revolutionary party, expecting and aiming at the overthrow of the entire established political and legal order, no professor, be his chair what it will, can join this party without at the same time renouncing his office. The official oath includes the recognition of the existing constitution, and manifestly no state can relinquish its right of expressly demanding

or tacitly assuming such recognition from every official. No state, be it republican or monarchical or what you please, will confer an office upon a man who declares it to be his political function to destroy its very foundation. To destroy its very foundation, mind you, not to reform and improve the state, for which provision is made by the constitution itself. No one can be an officer of the state who seeks to destroy it. Not for a moment can we imagine that a social-democratic republic or whatever the future state might call itself, would assume a different attitude in this respect. Indeed, it is to be presumed that it would go much farther and be forced to go much farther in watching those under suspicion and expelling its enemies than any one of the existing states. The more firmly established a state is, the less sensitive it is to criticism; the weaker it is, the more anxious it will be to ward off attacks and to suppress public criticism. And hence the freedom of teaching would be nowhere less assured than in a place where a new revolutionary government was compelled to defend itself against reactionary movements, where law and authority were insecure and depended wholly upon public opinion, the most uncertain thing in the world.¹

The case is somewhat different with respect to the private docent. He is not an official of the state, hence his particular duties are not circumscribed by law, nor does he possess the

¹ "The more naïve a power is, the younger the party-rule, the more brutal the parliamentary system, the smaller and more exclusive the society and its interests, the more the rich *parvenu* looks upon himself and his philanthropy and legal rights as a matter of course, the worse it will be for the freedom of science if it depends upon the power of these philanthropists." In these words G. Cohn in an article in the *Lotse* (vol. i., 455 ff, 1901), discusses the dismissal of a professor of political economy from a private American university on account of offensive economic views. With this agrees what Professor Perry says of some of the recently established "State Universities" in the United States (in *Monographs on Education in the United States*, ed. by N. M. Butler, i., 277): In some states, he says, "the constant changes in the political complexion of the legislature, and the self-seeking of party-leaders, have made the universities mere shuttlecocks of public or party opinion, and not only has their development been hindered, but in some cases their usefulness deliberately crippled. Instances are not unknown where particularly able and courageous professors, who would

authority of a regularly appointed professor. The state might easily disregard his entire teaching as a private matter and ignore the fact that he presented doctrines hostile to the state. It would not thereby recognize such teachings as legitimate nor consider their presentation as desirable, it would merely tolerate them as harmless and insignificant.

For the faculties, however, the case would stand as follows. The bestowal of the *venia legendi* depends upon the candidate's scientific ability, without which an academic career is impossible in Germany; but with his politics the faculty has absolutely no concern. Only in case the applicant for the *venia legendi* had appeared publicly as a political partisan and agitator, would the faculty be justified in considering this point. The question might well be asked whether such partisan activity had been pursued in such a manner and to such an extent as to be no longer compatible with the candidate's function as a teacher of science. This applies equally to all parties. The scientific investigator and teacher cannot and ought not to be a partisan in the sense in which a politician can be one and is occasionally forced to be one, and I am convinced that no faculty will regard pronounced activity as a political agitator on the part of a candidate for the *venia legendi* as a recommendation. The universities are and desire to remain non-political corporations. And they will be particularly sensitive on the question of propagandism for the social-democratic party, not

not cut their scientific opinions after the prevailing political mode, have been driven from their chairs, even by outrageously underhanded methods." Enough, I think, not to make the universities particularly anxious for a change from state government, acting in accordance with formal legal principles, into an arbitrary "socialistic administration" based on universal suffrage. The way in which the ultramontanistic demagogues spy into the opinions of and hunt down university teachers who do not "wheel into line like under-officers" gives us a foretaste of what conditions would necessarily result from an administration dependent upon party-leaders and those in control of the press. A régime controlled by such elements would never appreciate or understand true science; the party rabble cannot help hating and persecuting superior minds refusing to cater and yield to its instincts; even the envy of inferiority against mental superiority makes a different procedure impossible. The university men in the social-democratic party are already beginning to feel something of this.

only in order to escape conflicts with the government, but also because of the peculiar character of this party: it is, more than any other political party, a "sect" with a "doctrine" and "correct tenets." This fact was again brought out at the recent Lübeck convention: not only the member's political action, but even his literary and scientific work is subject to the approval and disapproval of the party. This follows necessarily from the fact that the party platform contains a dogmatic system, that there is "scientific" socialism or socialistic science. There has never been "scientific" liberalism or conservatism; these parties have no "system," but merely a practical political program. The social-democracy aims to be more than a political party; it has a *doctrina fidei* to which it binds its members or attempts to bind them, for the belief in the system which has undergone so many and such rapid changes of late years, is now naturally declining in spite of the fact that the party conventions officially maintain it. When the social-democracy ceases to be a sect with an iron-clad doctrine, when it stops prating about the revolution or playing upon the double meaning of the word, when it assumes the attitude of a reform-party and aims to reform existing institutions by bringing about complete equality before the law and by elevating the moral and intellectual conditions of the lower classes, then it will no longer be possible to justify the state in treating this party differently from the others.

Opinions hardly differ on this point. On the other hand, it is a debatable question, whether membership in the social-democratic party should exclude a man from the university, even from lecturing on subjects that have nothing to do with politics. The Prussian ministry of state has affirmed the question.

In trying the case of the private docent of physics, Dr. Arons, as the highest disciplinary authority, according to the new law, it based its decision upon the general theory that membership in the social-democratic party was in itself incompatible with the position of a private docent, and furnished cause for removal, under the provisions of the new "law dealing with disciplinary measures for private docents," since "it made him unworthy of the confidence which his calling de-

manded." Sitting in judgment on the same case, as the disciplinary tribunal of the first instance, and according to the same law, the philosophical faculty of the Berlin University had not been able to convince itself of the soundness of this position. The faculty was, in my opinion, right in assuming that the private docent was not an official and hence had no special official duties towards the state, that his character as a man and as a scholar, hence also his worthiness of confidence in these respects, were not affected by his political opinions, and that therefore, in so far as these opinions did not influence his teaching, he suffered no loss of confidence in his standing as a private docent, which would have been the case with an official. Nor was the faculty able to discover any political danger to the state in the fact that a private docent of physics was an active member of the social-democratic party.

It is to be hoped that this conception will gradually triumph in the political world. The stronger a government is and the better its conscience with respect to the duty of equal justice to all, the less it will be overcome by fears of secret revolutionary movements, the less also will it feel the need of making a show of power against those of other mind. Prince Bismarck reckons among the things which should not tempt the statesman, the show of power. Purely formal success that is without material value and merely satisfies the desire for a show of power confers no glory on a government. I cannot help thinking that the victory of the ministry over Dr. Arons belongs to this category of success.

And now let me add a final word. In excluding the presentation of doctrines absolutely hostile to the state from the university, which should, of course, not be made a field of experiment for all possible and impossible notions—let us not forget that anarchism has always led to absolutism—we do not at the same time wish to exclude the criticism of existing political institutions and social conditions. I am rather of the opinion that the greatest possible scope should be given to a bold and impartial criticism. Here as in all human affairs criticism is a necessary function. When it strikes at what has outlived itself, at what is false and of evil, at what interferes with the healthy development of the whole, it is, looked at from the

standpoint of the life of the people, a highly commendable thing. And it has a place in academic instruction also. It is an inevitable function of such instruction to turn the attention of the leaders of the coming generation towards the necessary development of public institutions along the lines of justice and public welfare. The more thoroughly the first task is performed and the historical necessity of the established institutions understood, which is also the reason in things, the sooner will the second problem be solved, for reforms must depend upon the knowledge of the necessity and limitations of what already exists.

That it is impossible to escape the hostility of those whose real or supposed party-interests would be injured by a change of existing conditions, lies in the very nature of the case. They will attempt to arouse the government against the critics of the state and society, with accusations and denunciations, and their objections will also be directed against a university administration that is slow to comply with their wishes. A government that is sure of its ground, that regards itself and has a right to regard itself as the guardian of the interests of the people, will meet such accusations with the same clear conscience with which it endures accusations from the other camp.

We should not forget in this connection that it was not the men who were always satisfied that made life better and were honored after their death as the great leaders of progress. In all truly great men there has always been present a noble discontent with reality, with the existing conditions in the state and law, in church and religion, in society and education, in science and literature. To mention examples in the intellectual or academic world, I call to mind Socrates and Plato. The former was condemned as one dissatisfied with the beliefs and views, the education and political organization, of his environment; as the first of the great recluses, the latter passed through life, giving expression to his deep yearnings in his writings. I call to mind Kant and Fichte; they likewise were two great malcontents. With ardent longing they searched for perfection, which to them was possible because it ought to be. In religion and in law, in church and in state, everywhere the real is infinitely far behind the ideal, as "pure reason" necessarily

conceives it. Men of thought they were, not men of action, but thoughts are the seeds of acts. The German universities may proudly boast that never has there been among them a dearth of men of noble discontent who sowed the thoughts for future acts. May there always be such men, and may the universities always have room for such men!

To those, however, who believe that limits can be set to thought by restricting the freedom of teaching, Dahlmann makes a happy reply. "You may drive the sciences out of the universities by confining them to the propagation of traditional truths. It is by no means beyond the power of the state to transform the former seats of free culture into mere workshops, but the blow aimed at the sciences would not hurt them, for they are not unfamiliar with the wanderer's life—as much as the youths of the state. It is by no means beyond the power of the state to compel these young men to attend such universities, but it has not the power to prevent them from despising institutions which contradict all the academic traditions and ideals esteemed in our literature, and which public opinion indignantly scorns. For the places to which a noble ambition once led men of the highest culture, would then hold merely the hod-carriers of science. . . . After all our trouble we should simply have succeeded in transforming our young men into a lot of 'misfits,' and a still more obstinate lot at that. There is no help for it, we must take the dangers of the science along with their blessings; science is the spear that wounds, but at the same time heals."¹

6. *The Professors and Politics.* In a well known passage of the *Republic* Plato attributes to the philosophers and to them alone the ability to organize and govern the state properly. In commenting on the passage Kant dissents from Plato's conception of the relation of the philosophers to the state: "It is not to be expected that kings should philosophize and philosophers should become kings, nor is it to be desired, because the possession of power inevitably destroys the independent judgment of the reason. But in order that both parties may properly understand their functions, it is indispensable that kings or kingly peoples (those governing themselves according to the

¹ Dahlmann, *Politik*, vol. i., p. 319.

laws of equality) should not permit the class of philosophers to perish or to become mute, but should allow them to speak openly. And there need be no fears of propagandism in such a case because this class is by its very nature incapable of banding together and forming clubs.”¹

Applying the terms used in our heading, this means that professors, the representatives of science, should not engage in politics, but should reflect upon the state and the law; and it is of importance that their thoughts be heard by the politicians. I regard this as the proper solution of the problem.

The scholars cannot and should not engage in politics. They cannot do it if they have developed their capacities in accordance with the demands of their calling. Scientific research is their business, and scientific research calls for a constant examination of thoughts and theories to the end of harmonizing them with the facts. Hence these thinkers are bound to develop a habit of *theoretical indifference* with respect to the opposing sides, a readiness to pursue any other path in case it promises to lead to a theory more in accordance with the facts. Now every form of practical activity, and practical politics particularly, demands above everything else a determination to follow *one* path, the path that one has chosen. That this path should be the best and the most direct path is not so important as that one should not waver between two paths. But such very resoluteness of will is weakened by long continued theoretical activity; the latter is apt to produce a certain indecision, a kind of *aboulia*, a tendency to doubt, not only before the decision has been rendered, but even afterwards. The thinker is too much accustomed to look at every question from all sides, to see the justice of the other side, to return to the starting point in order to discover whether an error may not have crept into the argument somewhere. All these qualities are virtues in the theorist, but they are defects in the practical politician who must possess the courage of conviction, of consistency, yes, of onesidedness. New conceptions may be formed; the truth is in no hurry. Not so with reality; the opportunity for action comes, and when you have embraced it, you must go on. The thought that you

¹ *Zum ewigen Frieden*, Hartenstein's edition, vol. vi, p. 436.

ought to have acted otherwise, has a disturbing and paralyzing effect. Hence it is not the men of strong theoretical tendencies who produce the great crises in history and reform institutions; it is the men of strong will, the Luthers and the Bismarcks, who stand at the portals of new epochs. At the entrance of modern scientific development we find men like Erasmus, Galileo, and Lessing, men who possessed courage and force, no doubt, only not the courage and force of action.

Political activity, on the other hand, produces a habit that would prove fatal to the theorist, the habit of *opportunism*. The practical politician is necessarily an opportunist. Whenever the object is to realize practical ends, it will always be necessary to reckon with conditions, to adapt oneself to circumstances, to make compromises, to hold principles merely as movable axioms. All these things would be absolutely condemned in the theorist; he has to deal not with the creation of conditions, but with the creation of concepts, not with reality, but with the truth. Hence he must be an *intransigent*.

An investigator who permits circumstances to influence him in his theories, who allows conditions, be they material or personal, to induce him to abandon his principles or to yield any of their consequences, who makes compromises for the sake of peace, in short, who acts like a politician, loses all claim to consideration. We desire to know from him what is true and a necessity of thought, not what happens to be permitted or seems to be opportune at the present time or in this particular place. To be sure, the investigator's views and convictions, too, may change, only the change must have been brought about by reasons alone, and not by conditions and motives.

This is one phase of the question. Theory unfits one for politics, politics unfits one for theory. The other phase of the question, which Kant emphasizes no less than the other in the passage quoted, is this. The formation of philosophical concepts concerning the state and law is doubtless necessary, and politicians do not act wisely in ignoring these concepts. The business of philosophy is, according to Kant, to deduce rational ideas from principles, by which the value of the actual institutions is to be measured and according to which they are to

be shaped; as, for example, the idea of a perfect legal state, the idea of a perfect legal union of all the states, from which eternal peace would follow. They are goals which the practical men must ever keep in mind, and which must help to direct their course.

The belief in the possibility of a philosophical deduction of right is not so strong in our century, the historical century, as it was during the age of natural rights. And yet it may be asserted that theory has not lost its influence upon practice even in our age. At the beginning of the century the practical politicians came under the influence of the Kantian philosophy, under the influence of the liberalistic theory of rights and its conceptions of a legal state, a state with its freedom limited by law and all its citizens equal before the law. At the end of the century a new theory exercised an important influence upon the practical politicians and legislation, the social-political theory, which assigns to the state not only the function to ensure formal equality before the law, but the further function to care for the socially weak by protective measures against the superior force of private capital as well as by institutions directly aiming at their welfare. Had it not been for the new theory, practice would scarcely have made such important advances as have been made in German legislation during the last two decades. Besides, it ought also to be remembered that the unification of the German Empire by Bismarck was prepared by the theorists, particularly by the historians, who introduced the idea of national unity into the flesh and blood of the people.

The proper relation then is this: It is the business of the theorist to devote himself to reflection and to create necessary thoughts, concepts and laws of that which is, and ideas of that which ought to be, remembering always that philosophical or conceptual thought and historical knowledge must go hand in hand. It is the business of the practical man to turn the existing institutions in the direction of the ideal, always keeping his gaze fixed upon reality, however, and carefully considering what can be realized. The theorists, as it were, represent the self-consciousness of the people in its highest form, while the practical men represent the united will of the people, which

realizes the idea by action, in opposition to the thousand obstacles of the moment. Science as such has no bias. But reality, and, above all, history, certainly has a bias, and this bias the investigator who impartially devotes himself to reflection, can recognize, much more surely than the practical politician who is steeped in the interests and conflicts of the moment. Of course, nothing can hinder the theorist from marking the recognized bias or the goal at which reality is aiming, his own, and passionately pursuing it; think of men like Plato and Fichte. But it is not wise to transfer to the philosopher also the business of realizing the ideal politically. The power to see things near at hand and the power to see them afar do not dwell in the same eye. What once happened to Thales, the Milesian, when with gaze fixed upon the sky and the stars he failed to see the well at his feet, might happen to the philosopher in politics. Nor would Plato's experiences in Sicily seem to invite imitation, any more than the experiences of the scholars assembled at St. Paul's church in 1848.

Hence the Kantian separation of the politicians and the philosophers will have to be accepted. The Platonic arrangement is impossible, impossible on account of the difference in the functions of the two. The man whose mission it is to listen to the deep and quiet thoughts that slumber in the soul of the people, cannot be placed in the noisy turmoil of everyday politics; and, conversely, the man whose business it is to put his shoulder to the wheel ought not to have too delicate a nervous system, yes, perhaps not even too sensitive a conscience; and his capacity to make use of all sorts and conditions of men ought not to be restricted by an all too delicate moral taste. But it is important nevertheless "that kings and nations should not permit the class of philosophers to perish or to become mute, but should allow them to speak out openly."

7. *The University's Duty With Respect to Political Education and Public Life.* In the discussions of the *lex Arons* the dismissal of Arons was also demanded on the plea that the university ought to cultivate patriotism. In the sense intended, the university cannot recognize this as its function. It is not a training school, its students are not minors; it is an institution

* for scientific research and scientific instruction, and such instruction it offers to foreigners as well as natives. In so far as it becomes immersed in the spiritual essence of the German people and deepens the knowledge of its historical life, we may of course confidently hope that the university will arouse feelings of love and devotion for the German character, and perhaps also help to destroy some objectionable features of the present age. And this will most likely affect both natives and foreigners. Perhaps we may say that the love which the German people inspires abroad is in a great measure owing to the universities. If the universities should also contribute to a knowledge of the evils and false tendencies of the present, and, on the other hand, help us to discover the forces necessary to free us from these evils, that, too, would mean something for the political education of our people, for the generation which is now receiving its impress from our universities will in a few decades direct events.

At the same time the universities must never forget that the things which they are called upon to cultivate transcend the boundaries of countries and nations. Truth and science are by their very nature possessions of mankind, and they are created and constantly augmented by the coöperation of all peoples participating in the intellectual life of humanity. The men who serve science form something like a Masonic brotherhood, as Lessing conceived Free Masonry; unhampered by what separates nations, sects, and classes, it is their vocation to exemplify and represent the universal human element against the narrow aspirations of particular groups. We feel more keenly than was felt in Lessing's day that the universal can be expressed concretely only in the particular, that the wealth of human nature depends upon the manifoldness of national forms. But we shall not forget Lessing's wise words that there are limits beyond which patriotism as well as confessionism ceases to be a virtue. Supersensitive nationalism has become a very serious menace to all the nations of Europe; they are in danger of losing their appreciation of human values. In its exaggerated form nationalism, like sectarianism, destroys the moral as well as the logical conscience: just and unjust, good and bad, true and false lose their meanings; what we call des-

picable and inhuman when others do it, we, in the same breath, advise our own country to do to a foreign people.

This is really the greatest work the universities can perform for public life; all of them together can serve as a kind of *public conscience* in domestic and foreign politics. The politicians who have their eyes fixed upon the most immediate goals are too apt to lose the standard of what is morally possible or impossible. Goethe's words, that the man in action is always without conscience, are doubly true of the man of political action. He is not working for his own good, but for the good of the whole; and what is not allowable to attain this end? Hence we need a tribunal that is not called upon to act, but represents and emphasizes the moral judgment. This would really be the function of the church, but the church is, actively and passively, too deeply immersed in the struggle for power. Hence, in Germany at least, the universities have taken up this work. Engaged in contemplation, they are less exposed to the temptation of power, to partisanship and party hatred, and for that very reason it is their mission to measure the acts of power by the ideal.

At a momentous period of our history, the German university proved true to its vocation to be the conscience of the country. I have in mind the seven professors of Göttingen who protested against the violation of the constitution by a despotic king and refused to pay homage to him. Dahlmann, the author of the protest, when commanded to withdraw the document under threat of punishment, declined to do so on the ground that this was not a case of disobedience, but "a defense against an illegal demand. But even this voice of necessity would not have been raised, had not those remained silent whose duty it was to act and to speak. By taking sides with the power aiming to destroy the basal law of the state, the ministers of state have forced the subjects to speak the truth in accordance with the dictates of their conscience." He concludes: "Shall we in future teach it as the basal law of the land that, what pleases the supreme power is the law? I wish to leave the country as an honest man and not to sell to my students falsehood and deception as the truth. Until then I was conscious of not having violated the duty of obedience

either by deed or by word, and I shall remain faithful to my duty: but I cannot recognize a duty of slavery." ¹

I cannot refrain from quoting the words of another one of these seven excellent men. J. Grimm in speaking of his dismissal once solemnly and beautifully expressed the idea that the German universities were the conscience of the people: "So long as their sterling and excellent organization remains what it is, the German universities will be extremely sensitive to everything good or bad that happens in the country. If it were otherwise, they would cease to serve their purpose. The frank and healthy minds of the young demand that their teachers shall at all times reduce every question concerning important relations of life and the state to their purest and most moral terms, and shall answer them openly and honestly. Here hypocrisy is impossible, and the influence of right and virtue upon the unbiased minds of the hearers is so strong that they instinctively submit to it and are disgusted by every kind of perversion. It is impossible to keep from them one's independent teaching, fettered by inner conviction alone, concerning the nature, conditions, and consequences of good government." ²

The presupposition of such service, I repeat, is that the universities be not dragged into the political controversies of the day as participants and accomplices. Such a proceeding would destroy their impartiality and objectivity. Just as the judiciary is isolated against political influences, for the sake of justice, which is thereby recognized as a supreme good, higher than all temporary political ends, investigators and teachers should be isolated against the same influences, for the sake of conscience and truth, which is a no less supreme and eternal good, higher than all the temporal interests of politics.

Viewed from this standpoint, it seems like a happy accident of fate, that the German universities should for many hundred years have enjoyed the good fortune of dwelling apart from the great world, far from courts and society, power and wealth. V. A. Huber has emphasized this point in a notable comparison between the German and English universities, for whose value as educational institutions for the leading classes he

¹ A. Springer, *F. Chr. Dahlmann*, 1870, vol. i., p. 431.

² J. Grimm, *Kleine Schriften*, vol. i., p. 36.

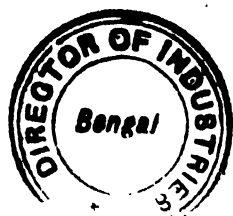
has the greatest respect. "The English scholars live too much in and for the world, so that it is hardly possible for them to develop that species of almost monomaniacal love for the subject of their investigations. Their standard is an entirely different one; it is not derived from the subject itself, but from the opinion of the circle to which they belong." In England the universities are parts of the political system, the scholars are enmeshed in the views and judgments of the governing class of society. The German universities dwell in their own world, outside of politics, and their highest achievements are in science. "It is our part, our glory, and our task among the historical nations of the earth," though not the only one, it is to be hoped, he adds, "that the German mind alone has hitherto achieved the highest pinnacles of science, impelled by the ferment of philosophy, and the old loyalty to and love of truth for its own sake, which are so characteristic of the German spirit." The cause for this fact he seeks particularly in the unique combination of defiance and diffidence, the genuine and precious jewel we call our spirit (*Gemüth*); but he believes that external conditions have also played their part: "our poverty and narrowness, the contempt or at least indifference of the world, our isolation, in short, so many joys and sorrows known among us." He is a little afraid of the future. "Will not the favor which science, in the persons of some of its representatives, is beginning to find in the eyes of the authorities, deprive it eventually of its dearest treasure, of its innocence, as it were? It is easy enough to see in France what happens when scholars are made courtiers, councillors of the state, etc." ¹

It is easy to see what this man would think of the most recent development of the German university system, the accumulation of large incomes, the adoption of the customs of fashionable society, the extent to which titles and decorations are bestowed, and similar things. He would hardly regard them as means of increasing the inner dignity and power of the professors, perhaps he would look upon them as means of making them more dependent upon the powers of this world, thus exposing the German university to the danger of becoming untrue to its purpose.

¹ V. A. Huber, *Die englischen Universitäten*, vol. ii., p. 500.

BOOK IV

STUDENTS AND ACADEMIC STUDY



CHAPTER I

MORALS

I SHALL discuss in this chapter two conceptions which play a great role in the life and sentiments of the student, the conceptions of *freedom* and *honor*.

1. *Academic Freedom, its Significance, and its Dangers.* The period spent at college is a period full of great significance for one's entire life; we may compare it with the germinating period of spring, upon the outcome of which the richness of the harvest depends.

The college days at present fall in the period of transition from youth to manhood. The training received at home and in the school comes to an end; the period of self-education begins. The new problem now is to form the inner man and to give his life a content by means of his own reason and power. In what way this is to be accomplished will depend on the individual's future calling in life. Whoever devotes himself to university study expects to enter the ruling class of society. He also assumes the duty to justify his right to enter it; he alone who has the moral insight and energy to act as a guide for others on the path of duty and truth, has a right to enter the ranks of the leaders. This fixes the goal at which such study should aim: independent scientific knowledge in some large sphere of life, and a character strong in virtue and efficiency.

Freedom is the precondition of self-education and culture. Freedom from outward compulsion is therefore the symbol of student days, the much vaunted academic freedom.

Indeed, the student days are the days of the greatest and most complete freedom from outward compulsion that life affords. Before and after this period we are surrounded with duties and restrictions of all kinds; the student is free to devote himself

wholly to his task of forming himself into an independent personality. He leaves the parental home and orders his outward life to suit himself; he disposes of his income as he chooses, he selects his associates and his friends. In the same way he disposes of his time. The pupil in the high school has a definite amount of work assigned to him every day; the university student selects his field of study, his university, his teachers, and the lectures to be taken. And he also assumes an independent mental attitude towards what the teacher offers him. The pupil has to learn and assimilate what is assigned to him; the student does not "learn" but "studies," he assumes an independent, critical attitude towards what he hears or reads. He can, if he chooses, stay away from the lectures altogether; no one is going to call him to account for that, no one is going to ask him why he is doing it or how he is spending his time, at least no one is officially charged to do such a thing. Such absolute freedom is never experienced again. Later in life a man's time is taken up with his calling and office, his family and society, and the many duties and troubles of the daily routine. The student belongs to himself, he is responsible to nobody and for nobody but himself.

To this great freedom the bright glamor which rests upon academic life is due. With his heart filled with hopes and expectations, the pupil looks forward to this period; with longing the man looks back upon the golden days of freedom, from the narrow surroundings of his later life.

Responsibility is the correlate of this freedom. The less of external compulsion there is, the more imperative is the duty of self-control. Whoever confounds freedom with licence, misunderstands its meaning; it is given to the individual not that he may do as he pleases, but that he may learn to govern himself.

This task is not an easy one; the danger of missing the right road is not small. Many do not know what to do at first with such unusual and excessive freedom, indeed it actually becomes a burden to them. They do not know exactly what to do with their time; they try one thing, then another; glance into this science and then into that one; pick up one piece of work, then another, only to drop it again. We ought not to judge of this

attitude too harshly. *Not infrequently such a state of vacillation is due to an instinctive desire to come into touch with things and men; the time is not lost if the nature of the student is broadened and he gradually succeeds in discovering what is suited to him. I shall later mention some of the ways in which he may learn to get his bearings in his helplessness. Sensible older fellow-students who have gone through the same experience and have found themselves, are the most accessible and perhaps also the best advisers. Moreover, the universities are doing more than they have done in the past to lend a helping hand during the earlier semesters by offering exercises for beginners.

Others are encouraged by such freedom and the difficulty of making a start, to abandon themselves, for the time being, to the present, and to taste the joys and pleasures of student life in an indiscriminate and aimless sort of fashion. That too may be pardoned; such a loosening of the reins is often the natural reaction against the overexertions of the last year at school. In case new and vigorous impulses for work spring up after a moderate period of rest and abandon, the brain may lie fallow for a while with good hygienic effects; and the experience too will not be without its value, teaching that it is not possible to ground one's life and happiness upon the love of pleasure.

The danger becomes more acute when, accustoming himself to a life without work and duties, the student gradually sinks into a state of listless inertia, which, occasionally interrupted by good resolutions and futile attempts to carry them out, finally degenerates into a kind of chronic exhaustion of the will. It is a danger to which the more indolent natures are exposed in our system. The suddenness of the transition from the long, rigid curriculum of the school to the absolute freedom of a course of study wholly left, for a series of years, to the individual's own judgment and energy, helps to magnify the danger. And then the feelings of discontent and weariness which are inseparably connected with a life of idleness lead to the use of the various narcotics by means of which human beings seek to disguise the inner emptiness of their lives. Fichte has described this phenomenon: "Laziness is the source of all vices. To enjoy as much as possible and to do as little work as possible, that is the

problem of the depraved nature, and the many attempts which are made to solve it are the vices of the same."¹

Persons of livelier and more energetic temperament may, however, purposely disregard the rational way of looking at things as Philistinism, and fall into that free and easy "transvaluation of all values" which has always found expression in student-poetry. They are not always fellows of inferior quality who consume their powers and waste their youth in such student exuberance or, as we now-a-days say, "supermanhood." After they have again come to their senses, the past seems like a curious intoxication to them. Nor are those lacking who never succeed in getting back to the sober view of life and go to pieces in consequence.

It is worthy of note, by the way, that Plato, who understood the human soul, already observed this phenomenon. He describes it in the eighth book of the *Republic*, in the place where he draws a parallel between the revolution in the soul of a youngster whose father has brought him up in a vulgar and miserly way, and who for the first time goes out into life and freedom, and the transition from the oligarchical régime to democratic freedom. At first, when the youth gets into the company of loose, unbridled fellows, the "drones' honey" tastes sweet to him, but the habits and conceptions acquired in the parental home still have influence over him; he is ashamed, the spirit of reverence enters his soul and order is restored. But his passions rise again, call to help desires which are like them, and secretly making common cause with them, bring the will to subjection. "At length they seize upon the citadel of the young man's soul which they perceive to be void of all fair accomplishments, and pursuits and of every true word, which are the best guardians and sentinels in the minds of men dear to the gods. False and boastful words and conceits grow up instead of them, and take the same position in him. And so the young man returns into the country of the lotus-eaters and takes up his abode there in the face of all men; and if any help be sent by his friends to the oligarchical part of him, the Messieurs Vain Conceit shut

¹ *Vorlesungen über die Bestimmung des Gelehrten*, fifth lecture, *Works*, vol. vi., p. 343. See also an essay by Tolstoi, *Why Human Beings Use Narcotics?*

MORALS

the gate of the king's fastness; they will not allow the new ally to pass. And if ambassadors, venerable for their age, come and parley, they refuse to listen to them; there is a battle and they win; then modesty, which they call silliness, is ignominiously thrust into exile by them. They affirm temperance to be unmanliness, and her also they contemptuously eject; and they pretend that moderation and orderly expenditure are vulgarity and meanness; and with a company of vain appetites at their heels, they drive them beyond the border. And when they have made a sweep of the soul of him who is now in their power, and is being initiated by them in great mysteries, the next thing is to bring back to their house insolence and anarchy and waste and impudence in bright array, having garlands on their heads, with a great company, while they hymn their praises and call them by sweet names; insolence they term breeding, and anarchy liberty, and waste magnificence, and impudence courage. In this way the young man passes out of his original nature, which was trained in the school of necessity, into the freedom and libertinism of useless and unnecessary pleasures."¹

Thus these transformers of all values.

I mention still another danger of freedom; the degeneration of youthful exuberance into spiritual unbridledness and unrestraint. Goethe describes it in the second part of *Faust*: the scholar of the first part, who has become a *baccalaureus*, typifies it in perfect form. He is making up for his former bashfulness by the most licentious kind of talk; he at once introduces himself to us as "freed from all restraints of narrow Philistine thoughts"; he feels it as the noblest calling of youth to put old age to death:

Dass nicht, wie bisher, im Moder
Das Lebendige, wie ein Todter
Sich verkümmre, sich verderbe,
Und am Leben selber sterbe.

Who will not think of Nietzsche, the *Unzeitgemässe*, who felt the call to brush away the mould of German educational Philistinism and the rubbish of academic life, who afterwards in the *Götzendämmerung* applies the hammer to all the heroes of the past, and then, with derisive laughter, breaks them all into

¹ Jowett's translation of Plato, vol. II, *Republic*, book viii.

pieces, the empty and hollow forms? And following in his wake we see the whole swarm of false geniuses, who, without a spark of the master's genius, imitate his unrestraint, hoping to enter with him into the temple of immortality.

Goethe contemplates this phenomenon with thorough equanimity.

Doch sind wir auch mit diesem nicht gefährdet;
In wenig Jahren wird es anders sein,
Wenn sich der Most auch ganz absurd gebärdet,
Es bleibt zuletzt doch noch 'nen Wein.

It is true the fermentation of the student days evaporates, not infrequently with astonishing rapidity; but the wine is in consequence often not the best. Of many it may be said:

Verfliegen ist der Spiritus,
Das Pflögm ist geblieben.

It is enough to have suggested the false and deceptive notions of freedom. True freedom, however, we insist, is that alone which Plato contrasts with the unbridledness of desires; the rule of the divine part of the soul over the lusts and desires, the feelings and passions of the "irrational" part. The purpose of academic freedom is to achieve this inner freedom in the battle with oneself and one's environment.

2. *Honor.* Next to freedom in the student's estimation of life's ideals stands honor. In what does it consist, in what does he glory?

Honor in the objective sense is the estimate in which the individual is held by his fellows, hence, in this case, by his fellow students. On what does high esteem depend in this sphere? Essentially on three things, in my opinion: courage, independence, and veracity.

Courage is the first. Cowardice is a fatal reproach to a student. The ability to defend his honor if necessary, even with a weapon in his hand, is a demand which his fellows make, first and foremost. The man, the man in the making, demands of himself, and the demand is made on him, that he be ready to stand up for himself and everything he holds dear. A man without courage, a man who is not ready to risk his life for a cause that is worth it, does not deserve the name of a man. By

which is not meant, we hope, a contentious spirit or, worse still, a love of brawling which tries to pick quarrels with everybody simply in order to furnish a proof of courage; real love of honor demands the respect of others' honor no less than the defense of one's own.

Nor should it be forgotten that courage, manliness (*ἀνδρεία*) in the full sense of the term, implies not only the power to resist danger and harm, but also pleasure and desire. To be a slave to pleasure is no less degrading than to be a slave to fear. Courage in the full sense is the manly sovereignty of the will over the nature-side of our being. This applies especially to the control of the sexual appetites. Here also a battle is to be fought and an honor to be defended, the honor of the spiritual self in the battle against the natural impulses, the triumph of which results in every kind of degradation and forces the individual into the most disgraceful society.¹

Independence is the second quality. I mean independence of will and judgment with regard to the demands of honor: the independence to follow one's own convictions of what is right and good and proper, not to bow to opinion because it is the dominating opinion, or to might because it has the power. It is plain that the student's sense of honor also aims at this. For we will surely be permitted to interpret thus the demand of academic youths to be measured by their own standards, as well as their cheerful and exuberant disregard of all kinds of conventional requirements of public opinion and society. And society makes these concessions as "following necessarily from the premises"; if the pupil is to become a man of independent thought and action during these years, he cannot be hemmed in by narrow barriers, he must have room to try to regulate his life himself and to rely upon his own judgment. The life of the student is, therefore, in the words of E. M. Arndt, "a life of poetic freedom and equality, a self-sufficient and self-controlled life without compulsion and without sin, in which the spiritual world stretches out immeasurably before him, and in which every exuberant pleasure or every youthful act of daring

¹ I call attention to a lecture by the physiologist, A. Herzen (Lausanne): *Wissenschaft und Sittlichkeit* (German translation, Leipzig, 1900).

is not confronted by a toll-bar and a watchman to drive him with staffs and pikes into the path of common custom and common virtue."

It will be an excellent thing if the fruit of these years is a proud and independent mind which bows in reverence to what is good and great, and refuses to honor and imitate what is base, even when it appears in the form of might.

To be sure, I cannot wholly rid myself of the fear that the age of "material politics," the traces of which are everywhere recognizable in the life of the German people, has also found favor and influence with the studying youth; they, too, have learned to esteem wealth and ostentation, to value outer appearances and conventional forms, to ape the customs of high society and to develop a mania for "correctness." I confess, the Philistine solicitude with which many circles insist upon what they call "good form," seems to me less in keeping with student ideals than the excessive indifference in these matters, which was formerly not uncommon among students. It at least showed courage on their part to apply their own standards as against prevailing custom. The all too ready acquiescence in the demands of talmi-elegance for "correctness" does not allow us to expect much independence of judgment and character later on, and when all these things are purchased at the price of privation and distress at home, this compliance with opinion becomes disgraceful servitude, nay, a thoroughly dishonorable frame of mind. "Cheerful poverty," on the other hand, is a proud affair; the ability to be surpassed by others in outward show, without feeling envy and without loss of pride, is really an evidence of a noble mind. Goethe's lines express it:

Ich bin ein armer Mann,
 Schätze mich nicht gering;
 Die Armut ist ein ehrlich Ding.
 Wer mit umgehen kann.

And connected with this is the ability to judge a man according to his inner worth, independently of wealth and rank. The aforesaid talmi-elegance usually goes hand in hand with plebeian arrogance towards plain people and with pliant submissiveness to power and wealth. In this respect also the German student

possessed a higher sense of freedom in the first half of the nineteenth century than is often the case now. We Germans fear God and nothing else in the world; the man who first uttered these words had the right to say them. But among those who speak them after him are, I fear, only too many who are afraid of everything in the world but God, who are afraid of society and public opinion, of money and rank, of everybody who may at some time be useful to them or harmful to them; yes, of every man of the people, even though he can do nothing but turn up his nose.

A word on making debts may not be out of place. I mean the frivolous making of debts which is the result of living beyond one's means. Debts mean a loss of freedom and honor; these are given in pawn to the lender. But whoever makes debts without the intention of paying back is at heart a thief. E. M. Arndt tells us somewhere in his *Wanderungen und Wandelungen mit dem Freiherrn von Stein* that von Stein did not think much of a niece of his whose extravagance had led her into debt: "Like his friend Niebuhr, he looked upon wise, old-fashioned customs and economy as an essential part of civic virtue; with the old Persians he believed that a man in debt would at last necessarily become a liar and a slave of men still worse than himself."

Finally the third point; veracity and frankness are among the things on which honor depends. Indeed, it is felt by the student's sense of honor that falsehood and breach of faith are, next to cowardice, the most disgraceful reproach. And frankness, too, may be reckoned among the qualities which youth esteems; the quick, frank word, the opinion spoken right out, even when it hurts, is preferred to a too cautious, calculating nature enveloped in a diplomatic coating. There is an instinctive feeling that openness and straightforwardness have value for a community which aims to make independent men of its members through free self-government.

But a still higher relation to the truth is demanded of the student: when he enters the university he theoretically places himself in the service of the truth. To seek for it and appropriate it is the first duty, to apply it and make it fruitful if he can, the further task of every one who considers

himself worthy to be counted among the *clerus* of the nation. Love of truth and courage of conviction would then be the qualities peculiar to the disciple of science; love of truth: pleasure in investigation and work, the impulse to woo and battle for truth; and courage to tell the truth: the will to stand up for the truth even when no one wants it, even when it arouses hatred and enmity and brings one contempt and derision.

Let Fichte express this thought with his impressive pathos: "It is a refreshing, soul-stirring thought which every one among you can have who is worthy of his vocation: To me, too, in my sphere, the civilization of my age and the following ages is entrusted. . . . I am called to bear witness to the truth; my life and my fortunes amount to nothing, the effects of my life amount to infinitely much. I am a priest of the truth; I am in her service; I have bound myself to do and to dare and to suffer everything for her. Should I be persecuted and hated for her sake, should I even die in her service, what should I be doing that is remarkable, what should I be doing further than what I simply had to do?

"I frankly confess, in the position in which Providence has placed me I should like to contribute something to diffuse among men a manlier mode of thought, a stronger sense of dignity and worth, a more ardent zeal to fulfill their mission, be the danger what it may, wherever the German language extends and farther, if I could; so that when you will have left these halls and will have been scattered over the entire land, I shall know you to be men, in whatever parts of the world you may live, men whose chosen friend is truth; who receive her when she is driven out by the whole world; who publicly protect her when she is slandered and calumniated; who for her sake cheerfully endure the slyly disguised hatred of the great, the shallow smiles of the foolish, and the pitying shrugs of the narrowminded."¹

That would be honor in the true and noble sense of the word—to deem oneself worthy of a great task and to prove oneself worthy of it. The applause of the multitude and the honor achieved by outward show and money, will always have their lovers, only they ought not to be found among the spiritually free, not among students.

¹ *Bestimmung des Gelehrten*, fourth lecture.

CHAPTER II

REGULATION OF STUDIES AND FREEDOM OF LEARNING

1. *Preparatory Training.* The requirements for admission to university work are now fixed throughout Germany by public regulations. For full entrance at a university with the subsequent privilege of admission to the examinations and offices, all the German states now require the certificate of ripeness or fitness (*Reifezeugniss*), which is won by passing the final state examination in a higher school of nine grades. As a matter of fact the completion of the course in such a school regularly precedes the examination, although persons who obtained their preparatory training in some other way, perhaps in private institutions, are also admitted to the examinations, but their number is small.

The establishment of this system, the so-called *Abiturientenprüfung*, came about gradually during the last century, beginning with the first regulation for such an examination, held under the direction of a state commissioner in Prussia in 1788. I shall not rehearse the several stages of development; how the traditional entrance examination was for a while allowed as a substitute for the final school examination, but was gradually abolished, in fact, had to be abolished, if the latter was to be taken seriously. Nor shall I describe how the new forms of the nine-grade institution came into existence by the side of the old classical *gymnasium*: the *Realgymnasium*, without Greek, the *Ober-Realschule*, without any ancient language at all; and how they gradually obtained their demand for the admission of their graduates to the higher schools, and finally to the universities, even though a few restrictions are still in force. This was not less a matter of necessity. At the beginning of the twentieth century the ancient languages are not

necessary to the extent or in the degree in which they were at the beginning of the nineteenth century, nor do they form an adequate basis for scientific study. Mathematics and the natural sciences, the ability to see and observe, and a knowledge of the modern languages, have increased extraordinarily in importance. The rise and recognition of the new forms of the gymnasium were, therefore, an unavoidable necessity. Of course, it is self-evident to every one who knows anything about the universities that some knowledge of the Latin is still indispensable for every one who attends them.¹

This system which makes admission to the universities dependent upon graduation from a higher school (passing the so-called *Abiturientenprüfung*)—though without the certificate of maturity it is indeed possible to matriculate and hear lectures, but without the privilege of taking either the state or university examination—now seems to be almost self-evident to us. And it has, beyond all doubt, such great advantages that a return to the freedom in vogue in other countries, America and France, for example, where the old entrance examinations as well as the final examinations of the secondary schools admit to the university, is entirely impossible for us. It is only through this system of final school examinations that the student, on the one hand, and the faculties, on the other, are really secured against entirely insufficient preparation. Of course, even our certificate of maturity is no safe guarantee of the capacity and the strength of will required for scientific studies; every year the examinations are passed by young men whose success is due entirely to mere patience and strong external helps. Nevertheless they assure us against wholly inferior elements; it is without doubt true that the mere prospect of these examinations deters a large number of those who are entirely incapable or wholly lacking in determination from the university and the professions requiring a university education, who, under more favorable external circumstances, would be able to enter. I will not here try to decide whether this purpose could not be secured without laying

¹A detailed description of this movement has been given in my *Geschichte des Gelehrtenunterrichts*. My views on the requirements and the latest regulations are developed in an article, *Die höheren Schulen und das Universitätsstudium im 20. Jahrhundert*, 1900.

such strong emphasis upon the governmental character of the examination as is customary in Prussia.

But, while we are indebted to our well organized system for the assurance that we can presuppose in our students a certain degree of knowledge and a certain amount of experience and practice in intellectual work, there is also, it must be admitted, an element of danger in it. This is due to our rigid adhesion to the scholastic method, which, because of the prospective final examination, ties the student down to the very last day, and is so strict that the pupil in the upper class, who is from eighteen to twenty years old, is treated, kept at work, and supervised, just like a boy learning the elements in the lowest class; like him, the former is daily given a number of scholastic tasks to be handed in at certain definite times. Naturally, the examinations demand uniform training, and this is secured by uniform lessons, and this again by means of daily supervision.

As a result a phenomenon is often met with now-a-days in the highest grade of our gymnasia which may be described as school-weariness. It is something like the inertia due to official routine, and the work is done only with unwilling industry under the pressure of the approaching examination. When, finally, the examination has been passed, this "tired feeling" finds relief in that stretching of the limbs observable in animals that have been long in harness; the school-harness has been laid aside, and there must be recuperation, if not from overwork (for it was certainly not always too heavy), at least from the compulsion so long endured.

Assuredly, the transition from the school to the university has always had its difficulties, but I believe they have been increased by the adoption of the system of final examinations. Formerly the transition was more gradual; the higher grade of schools were somewhat less rigid in their system, larger concessions were made to personal inclination and individual talent, and, on the other hand the beginning of the university course was more scholastic. A student coming to Leipzig from the old *Schulpforta*, a hundred years ago, did not find a very great difference; at school he had enjoyed some free days for study, tried his hand at modest independent efforts, perhaps taken his leave with a more ambitious valedictory; at the uni-

versity he would at once find incentives to continue his work on a larger scale as a theologian or philologist. Since then the distance between school and university, in respect to form, method, and material of work, has developed into a chasm, the bridging of which is exceedingly difficult. Not a few labor at the task in vain, only to reinforce the army of stragglers, self-opinionated, malcontents, and failures.

This system in the form in which it has developed among us cannot now be undone. But our view of the situation will become clearer by a comparison of our own system with foreign and different ones. In America, where everything still is more flexible than in old Europe, a peculiar combination of English and German forms has grown up. Between the school proper and the university proper—the *graduate school*—there has been inserted an intermediate grade, the *college*. The four years spent at college are usually those between 17 and 21; they answer, therefore, to the last years at school and the first years at the university with us. And the methods and customs correspond to the dual nature of the college: they are no longer entirely those of the school and not entirely those of the university. The young people are students, they no longer live at home, but neither are they left entirely to shift for themselves, but live in the college. During the first two years their work is mainly modelled after that of the schools, but besides the required subjects there are also some electives. During the last two years the freedom allowed is greater and the instruction, which specially covers the philosophical sciences, approaches the academic form, but in such a way that the scholastic relation existing between teachers and pupils is retained.

I will allow an American, who is also familiar with the German conditions, to express himself concerning the value of this form. Professor Emerton (in the article already mentioned on page 71) summarizes his opinion as follows: "But the peculiar meaning and value of the American college has consisted, not so much in its studies as in the form of life under which these have been pursued. No American college has ever been successfully developed in a great city. The typical college is a rural institution. The essential thing in its discipline is that the youth leaves his home and during four years enters into

a life which, in spite of many limitations, is on the whole one in which he plays his part as an independent self-reliant individual. He lives in association with a multitude of other youths of similar habits and similar aims. He gives himself up during these four years to the happy traditions by which the early lives of the men he has been taught to reverence were formed; but he learns also that he is in so far responsible for himself. His life is, in the main, guided and sheltered, but he is made to feel the necessity of independent action. He comes out of his four years of mingled work and play without a specific preparation for anything whatever, but, if he has used his time wisely, ready for any kind of further training he may select."

We cannot, as has been said, get away from the institutions which have grown up among us. But I fail to see what would prevent us from essentially approximating this system in our methods, and it seems that we are moving in that direction. The placing of the three forms of the gymnasia on a basis of equality already shows that the old rigid demand for an "all-sided education," to realize which the Prussian gymnasial system was first inaugurated by Johannes Schulze, can no longer be maintained. Elective courses have also made their appearance, as well as the system of compensation in the *Abiturientenprüfung*. Let us go still further, let us accentuate the division in our class system between the upper and middle classes (*Unter- and Obersekunda*); let us give more scope in our upper grade to individual talent and initiative, so that special zeal and success in one branch, or in a group of related branches, will condone for a relative lack of success in other branches not so well adapted to the student's capacity and inclination. For example, let us reduce the requirements in mathematics in the gymnasia for those who do not like this branch, with the proviso, however, that they do correspondingly better work in the ancient languages; or, on the other hand, let us abate somewhat our insistence upon correct Latin in the case of those whose talents point them to mathematics and physics. Or, better still, let us form a select class in each group into which it would be an honor to be received. It is the spontaneity of acquisition which gives value to knowledge, not the extent and uniformity of its possession, not the much praised "all-sidedness."

The university can also make an effort to bridge the chasm from its side. And here too the process has already begun; the constant increase of exercises, especially the establishment and perfection of exercise courses for beginners (of which more will have to be said later on), in addition to the seminars for the advanced students, will be serviceable for this purpose.

2. *Academic Regulation of Studies.* In Germany this is limited, in the main, to a requirement for residence and a fixed number of semesters for the several branches. For the rest, and in contrast to the fixed gymnasial courses, the individual has almost unlimited freedom: the arrangement and sequence of studies, as well as the choice of subjects, lectures, and exercises, and finally and especially the use of the offered instruction, are all really left to individual choice. The university demands merely that a student shall register for at least one lecture course in each semester, not that he shall attend. Even the rules for the examinations touch upon the question of preparation usually in such a general way that there is abundant room for interpretation. Thus, in the most recent regulations for the upper-master's examinations (*Oberlehrerprüfung*) in Prussia (1898) one of the evidences of "due preparation" is stated to be "that the candidate, unless he has a special excuse, shall have taken part in those lectures and exercises most essential to his specialty, and shall have heard, in addition, several lectures of a general educational character." And the commission is given to understand that the candidate must be rejected when such evidence is not forthcoming. But so far as I am aware no attention is paid to this rule. Its indefiniteness will scarcely permit its application. It can, therefore, accomplish very little more than make the student careful to obtain the official signature of the professors at the beginning and end of a few lecture courses which are supposed to meet the requirement. He can attend them or not, as he pleases. The regulations for the juridical and medical examinations do, indeed, go a step further in that they prescribe certain lectures and exercises as indispensable.

- The question might be raised whether, in view of such a wide exercise of personal choice, it would not be advisable to take still another step and do away also with the requirement for

residence. The state,* it might be argued, could appoint examiners, and draw up rules for examinations, making the requirements equal to those which must be met by candidates for office or for admission to a profession, but leaving it to the individual himself to decide where and how he shall acquire his knowledge. If he sees fit to use a university for this purpose, well and good; but why interfere with him if he is convinced that in his case some other school, or perhaps no school at all, but purely independent study of scientific literature, would be more suitable? Why compel him to reside at a university and pay fees for matriculation and lectures, when he can, in no case, be compelled to use the instruction offered by the university? Is it impossible to learn philosophy and philology or jurisprudence and theology from books only? Are not many of the university lectures hardly more than a meager repetition as compared with the best books? Has not a capable young man the right to pass them by and apply himself to the sources of knowledge? Or rather, every one already actually has that right, yes, even the right, if he wishes, to satisfy his thirst for science at any secondary spring or rivulet; how many annually pass the examinations with knowledge picked up here and there? Why, then, the compulsion to live at a university? Is it merely to assure the professors their fees and to fill the lodging-houses and the hotels of the university town?

As a matter of fact, it cannot be denied that earnest and fruitful pursuit of the sciences is possible outside of the university and without the auxiliaries of academic instruction. In England this is not at all infrequently the case. Men like J. S. Mill and H. Spencer never attended a university. Nor would I, under all circumstances, advise a mature man in Germany, who, from pure interest in the subject, had determined to study some science, like philosophy, or law, or political science, to go to a university for that purpose and hear lectures. Nevertheless, the requirement of university study as a prerequisite for admission to the state examination does not seem to me to be groundless. The state must make its arrangements in a general way, knowing in advance that there will be exceptions to which they are not adapted. But that, generally, academic instruction is the quickest and best way to secure a scientific

education, such as is required by the learned professions, does not seem to me to be a matter of doubt; nor does any one, excepting such a thorough-going despoiser of these institutions as Dühring, deny this. The thing is perfectly plain in the case of subjects which require a large equipment of apparatus, like medicine and the natural sciences. But for the other departments also the university with its lectures and exercises, libraries and laboratories and, not to be forgotten, its entire intellectual atmosphere, its stimulating intercourse with kindred spirits, societies, etc., cannot easily be dispensed with.

And it ought not to be forgotten that while these requirements restrict, they also, at the same time, often insure real freedom. Compulsory education limits the personal choice of both parents and children; but in reality it assures the independence of both in that it guarantees schools even in a poor or indifferent community, secures an education for the children by putting it beyond the control of childish folly on the one hand or the shortsightedness and selfishness of parents on the other. And it is precisely in the same way that the obligation to take a university course protects one's freedom against one's own or another's lack of judgment. If the method of preparation for the state examinations were left to each individual's choice, the student would not infrequently be tempted to avoid the expensive university course by preparing privately at home; nor would it be impossible, provided the examining commission was absolutely indifferent as to where the candidate and his knowledge came from, for establishments to grow up by the side of the universities which would offer the quickest, surest, and cheapest preparation for the examinations. Enterprises of this kind, it is well known, are not now entirely wanting, although the requirement for university training prevents them from posing as legitimate and normal forms of "scientific" education.

Academic study also, at the same time, secures a certain similarity in general intellectual culture, a kind of uniformity of thought and feeling. The learned professions could certainly not afford to remain indifferent if entrance to them could be had through all kinds of side doors. It is well known how long and effectively they opposed the recognition of other

schools by the side of the gymnasia, in the interest of "the honor of the profession"; would they not oppose the setting aside of the university much more vehemently? And not without reason, in this instance; the consciousness of a kind of corporative unity which the members of the learned professions carry with them into office from the university is not without value.

3. *Election and Compulsion.* The course of study at a German university is based upon the principle of freedom of learning (*Lernfreiheit*), which is the correlate of freedom of teaching (*Lehrfreiheit*). Aside from a fixed period of study, almost everything is left to individual choice; there is no prescribed course of study, with intermediate examinations, as at the French faculties; each student selects the branches which he wishes to study in each semester, and attendance upon the lectures depends solely upon his own volition; the freedom of learning is so extensive that it actually includes the freedom not to learn or do anything.

There is no lack of abuse of this liberty. Blunders are made sometimes on account of ignorance; many an *Abgangszeugniss* (testimonial given the student upon leaving a university) reveals at first glance, by the sequence and choice of the lectures and exercises, the student's perplexity in selecting them.

And few will avoid making mistakes in the choice and order of lectures; almost every one, arrived at the end of his course, is conscious that he could have done many things better than he did. Nor is there lacking abuse of this liberty from the want of an earnest will; frivolity, inordinate love of pleasure, and laziness lead many a one into a life of inane folly, from which it is impossible to escape until it is almost or entirely too late.

And first, a word or two concerning the student's helplessness in the choice and sequence of lectures and exercises. It would seem that this could be obviated by an official regulation of the course of study. In the juridical and medical faculties the examination regulations give a few general directions, and, as a matter of fact, it is perfectly possible to apply the principle of correlation of studies, which stands out so prominently here, to the regular sequence of subjects, at least in general outline. On the whole, the fluctuations of personal choice will here be con-

finéd within comparatively narrow limits by the circumstances of the case. And in opposition to the inclination to make the course too rigid, it may be said that science has many approaches, this one is easier for one, this one for another, according to inclination and talent. Moreover, the liberty to pass freely from one institution to another, to which our university system owes so much, makes a rigid regulation of the course impossible: no one will wish to hinder a student who has the opportunity of hearing an excellent instructor, from taking a course of lectures under him somewhat before the time and postponing, to do so, another course for another university. All this applies still more to the theological and philosophical faculties: to fix the sequence of studies here in an obligatory course would be an unqualified evil. There can be, of course, no objection to an optional schedule of studies, such as was formerly often suggested to students at matriculation. But even the adoption of an official schedule of studies by the faculties would meet with serious difficulties. And a required course would be simply impossible. The individual must be left to find his own way, though this does not mean that he should not seek private advice; it rather presupposes it. If he happens to select a roundabout way, well, the direct way is not the one from which most of the surrounding country can be seen. If only one arrives at the goal, byways and roundabout ways will do no harm. Goethe has a kind word to say about the usefulness of such mistakes, and he certainly was no friend of error or of getting lost. He once said to Eckermann: "It is a good thing to seek and to go astray, for by seeking and straying we learn. And one learns not merely the bare fact, but all the circumstances. What would I know about plants and color if my theory had been handed over to me ready-made, and I had learned it off by heart? But because I had to seek and find everything myself, and occasionally had to go astray, I can now say that I know something about both these things, and more, too, than I have put upon paper." (III, 73.)

As to the second point: the lack of an earnest purpose to make the right use of academic freedom. The fact that it is abused by many students has forced upon anxious government officials and representatives, heads of families and university

professors, the problem whether this freedom might not be safeguarded against such abuse. Could not a lack of individual will power be supplemented by means of supervision, honors, compulsory attendance upon lectures, more frequent examinations, obligatory exercises, and similar things? There need not necessarily be the compulsion of the schools, but a little assistance might be given to young people who, as they themselves recognize, still have too little will-power to decide for themselves what is really needed. The consequence is, that many students miss the real value of the academic course: the first semesters are as good as lost and the last ones must then be employed in a hurried acquisition of the knowledge needed for the examination.

The evil really exists, even though its extent is not seldom much exaggerated; I refer the reader to what has already been said above upon this point (p. 200). But I do not think very much of the methods by which it is proposed to remedy it; I fear the looks of the thing, and its concomitant effects. If we really wish to maintain our freedom of learning, if we do not desire a system of university instruction modelled after that of the schools, we must have the courage to desire a thorough-going freedom at the cost of any possible abuse of it. We must recognize that freedom without the possibility of its abuse is an impossibility. There is only one possible and necessary counterpoise to freedom: a strict state examination. In my opinion this is the only really effective outward incentive to study, and it is effective simply because it is not an arbitrarily imposed one, but made necessary by the very nature of the case. The state examination has a pedagogical effect, just because it is not intended to be pedagogical, because it does not call to mind the regulations of school-discipline and school-supervision; the educating power of reality is in it. Concerning those other methods through which it is proposed to assist the student, I would offer the following suggestions:

1. All the proposed methods of supervision would be substantially ineffective. Young men between the ages of nineteen and twenty-five cannot be compelled to learn, much less, to do scientific work. That plan does very well in the schools, where they are under control, and where the influence of the home is

still potent. And it is really a question whether it works there, especially in the highest grade. But it in no wise applies to the university; unless, indeed, we should go back to the Middle Ages, and housed the students in colleges and burses. If this is impossible, if we neither can nor wish completely to transform the entire external and internal form of our university life, as it has grown up during the last two hundred years, we cannot expect to make students diligent by supervision and compulsion.

Schmoller once suggested that a record be kept of the student's attendance upon lectures and the results be forwarded to his parents at the end of each semester (as is the present practice in France): there should be full liberty to loaf, but the facts should be made known.¹ Even if the suggestion were a practicable one—which it is not—how could this system of control be carried out in the large universities? By calling the roll? Shall the instructor do that, or shall some university official note down the absentees either at the door or while the lecture is going on? Or shall each student present sign his name in a record? Or, granted that the thing is practicable, how would it affect the students themselves? It would certainly not be edifying; on the contrary, it would arouse a feeling of humiliation and resentment, even on the part of the maturest and most efficient, which would certainly not be favorable to hard work. For others it would be an incentive to get their names upon the roll in all sorts of surreptitious ways, all of which could not be circumvented by the authorities, and the result would be that idleness would be protected by positive testimonials of industry and surrounded with the semblance of duty well done. Shall we then attempt to control studiousness by means of examinations at the end of each semester or term? How would it be possible, again especially at the large universities, to carry such a plan into effect, to examine all the students in all branches, either orally or in writing, without either wearing out the examiners, or bringing the examinations into contempt? And all this entirely aside from the effects upon the persons examined: passive resistance and deadening of the desire for knowledge on the part of the ablest and most efficient, mere routine work on the part of the

¹ Schmoller, *Jahrbücher für Gesetzgebung*, 1886, p. 612.

mediocre, make-belief and fraud on the part of the dishonest. It would be incumbent upon us to go a step further and have small, separate classes with regular work, instead of the freely-chosen lectures; in other words, we should have to transform the university into a school.

2. The suggestion to make obligatory exercises the center of instruction points in this direction. The proposition is to compel participation in certain exercises during each semester, and to require written work which is to be graded by the instructor, under the penalty of loss of credit for the entire semester. Such a suggestion, so far as I can learn, was first submitted by Rümelin, and intended for the jurists.¹ It seems to have formed the basis for the regulation of 1897, governing the preliminary law examination in Prussia, which makes it incumbent upon the student when he presents himself for examination, to offer proof of participation in at least three prescribed exercises in the form of testimonials and corrected papers. Subsequently, in a work already alluded to, Bernheim suggested the extension of the practice to the other faculties; only such semesters in which a sufficient amount of work has been duly reviewed by the instructors, should receive credit.

It must be admitted that this method is, under certain circumstances, as in the case of the jurists, less open to objections than the others, more especially because its provisions are directly connected with the state examinations. But, nevertheless, I cannot regard as wholesome the general introduction of compulsory participation in the exercises, especially for all semesters; and Bernheim himself seems to have receded from this position. The main argument against it is this. The character of the scientific exercises at a university depends essentially upon the fact that the few who participate in them do so voluntarily, although self-evidently a certain degree of supervision of the attendance of those who register, for example, by rejecting those whose sole aim it was to get credit for the course, may be exercised at the option of the director. They would, however, lose much of their character and value, both for the instructors and students if by fixed regulation they should be transformed into compulsory exercises for all. This is especially true of the philosophica

¹ *Jahrbücher für Gesetzgebung*, pp. 1097 ff.

faculty, where at present a select number of students are attracted to certain teachers by a desire for real scientific work. But if all, even the unwilling ones, were compelled to take part, the entire life of such classes would be disturbed; in place of voluntary attempts at scientific work, we should have, in part, at least, the compulsory tasks of the schools, in which neither instructor nor students could find any pleasure; instead of the university with its independent societies and labors there would be classes like those in the schools, with a prescribed amount of preparation, exercises, corrected papers, and all the disagreeable things connected with them.

So far as I have been able to learn, the jurist's delight in the new regulations is by no means an unmixed one; aside from an excessive burden of cheerless work for the conductor—a colleague assured me that he had to correct and grade 7,000 folio pages in a single semester—the results for the participants are often very meagre; the same colleague told me that formerly there were a few efficient papers, but now he received a mass of mediocre work of little value.

One thing more. Can the undesirable incidental effects of compulsion be avoided? Will attempts at dishonesty be prevented? Will not factories for the production of such compulsory exercises come into existence? I hear that such institutions have already become active among the law students. And will not the relations between colleagues be unpleasantly disturbed when the students discover the different meanings of the necessary "satisfactory" or the desired "good" as used by different instructors, and select their courses accordingly? Would it not then become necessary, in order to prevent friction, to determine upon a maximum of attendance upon lectures and exercises? And ultimately we should have to exercise a kind of control over the marking systems, like that which the school director exercises over the grades of the gymnasium teacher. Thus here again the result would be to transform the university into a school with fixed classes and a definite course of study. The joy of the academic instructor, who would have to supervise young men of the age of our students, may readily be pictured! The relation between teachers and students is now throughout so wholesome because it is a voluntary one: the student who

cannot get what he wants in the lecture room remains away, a proceeding in all respects better for him and all concerned than a forced physical presence on his part.

And this also would have to be considered. If, instead of voluntary lectures and scientific exercises, obligatory exercises and compulsory work were substituted, would men who amount to anything as scientific investigators and writers be willing to become university instructors? Does any one really believe that men like Wolf and Boeckh, Ranke and Waitz, Savigny and Gneist, J. Müller and Helmholtz would consent to spend their lives in setting tasks and correcting work for reluctant participants in compulsory exercises? What the elimination of such names from a university would mean need not be further discussed. If you turn the university into a school—well, then it ceases to be what it has been thus far: a place for scientific investigation; the distinguished scholars and investigators would retire to the Academy, and the same separation that now exists in France would come about here.

But all this need not imply that there is any objection to allowing the work that has been examined and passed upon by the director of the exercises to be considered in the examination; it ought at least to be permitted to submit such work; two excellent papers would, naturally, be a recommendation in any examination. And perhaps a further step could be taken by allowing the examining commission to give credit for such work, just as is now done in the case of the thesis. It may be taken for granted that a piece of work which has grown out of the exercises would furnish a better guarantee of independent thought and scientific capacity than an essay on almost any prescribed subject, hastily put together in six weeks with the help of all sorts of literature.

3. There is still a third argument against compulsory studies. Even if supervision and control should always bring about the desired result: even if an average amount of industry could be produced in that way and all the students could be guarded against failure in the examinations—as is now to some extent done in the final school examinations—even then we should not desire them. One of the principal objects of academic study would be frustrated: the university would cease

to be the school of independence that it now is. The student ought to learn the difficult art of controlling himself, of working spontaneously, so to speak; and this can not be acquired under compulsion. An Englishman once asked me: How does it happen that the Germans, who usually lay so much stress on regulation in the school and in life, allow the university student such unconditional freedom, much more than in England? I replied that it was probably due to the instructor's feeling that it was necessary at some time to throw the individual on his own resources if he was to become a man. The years at the university are the test which decides whether a young fellow has in him the making of a man who can guide and rule himself, and then also others. Whoever does not learn this is ruined and is in this way eliminated. This is, of course, a bitter experience for those concerned. But for the state it is a needful guarantee against an irrational society. In spite of the loudest protests of nature the young fellow has been pushed and whipped through the gymnasium; now he is sent to the university, merely that he may afterwards be thrust upon the state as an applicant for office. But here a man who has too little to offer, either in the way of intellectual gifts or energy of will, makes a failure; which is not a loss for society, but rather a guarantee against intellectual and moral insufficiency. The parents usually place the blame upon the university: it did not know how to attract him and make him work. Assuredly, it did not, as it is the duty of the gymnasium to do, force and push him; but neither did it beg him to come: it only invites those who, as wooers, court the gifts which it offers.

I am well aware that by this process even young men, who, with proper care, would have developed into very serviceable officials, come to grief and ruin. They represent the price which we must pay for the school of freedom. It is costly, but cannot be had for less; the young must be exposed to such risks if we are to have men. The university is not a kindergarten; nor is it skilled in the art of "educating a young prince, who has a horror of all study, so that he will, nevertheless, become learned and clever." The individual must depend upon himself, upon his own will. And the more plainly each one is given to understand that no one will be responsible for him, that no one will

drive him, that, no matter how he carries on or what he does, it is always at his own risk, so much the better! Let there be no illusive security! If he goes wrong, the university cannot prevent it; she may perhaps quietly console herself with the thought that even error is not without profit to a man who, by his own effort, finds the way back to the right road. By weathering the storms the tree grows sturdy, and in conflict with himself and the world the youth develops into a man.

Such is the attitude of the German university. And it is this very feature which, in later life, arouses the true man's gratitude that he was not led about by the hand like a schoolboy, but was allowed to find his own way. He feels that forces were awakened in him which enabled him to see for himself and to depend upon himself. Not the teachers only—he will have been fortunate if, here and there, one of them succeeded in throwing a little light upon his path—but the entire university, its life and its environment, everything taught him self-dependence, everything called out to him: to allow yourself to be pushed and pulled along amounts to nothing; what you are to be depends upon your own will.

Since this question touches the very heart of the German university, two classical witnesses shall add their testimony on this point.

H. von Sybel, in his rectoral address on the character of the German universities says: "It is impossible to overestimate the advantage in favor of our universities in having for their essential aim the complete emancipation of manhood. In the lower schools authority necessarily controls the individual in every direction; in later life practice and, consequently, authority, again control a considerable portion of his existence. But every educated man on German soil should experience at least one moment of life when all the organs of authority, even the nation, the state, and his instructors proclaim, as the supreme demand upon him, the injunction to be intellectually a free man." And Schleiermacher in his *Gelegentliche Gedanken* (p. 110) declares that learning is not the real purpose of the university, but the purpose is "to arouse, if possible, an entirely new life, a higher, truly scientific spirit in the youths. But this cannot be done by compulsion; the attempt can only be

made in the atmosphere of complete intellectual freedom, even speaking generally, but especially among Germans and with Germans. Just as a human being can be brought under the law of love and faith only by love and faith, and by assuming him to be susceptible of these things, and not by means of any kind of force or the compulsion of external exercises; so likewise he can be brought to science and knowledge, which deliver him from the service of all authority, only by influencing him through knowledge and through nothing else. And we Germans, especially, the avowed worshippers not only of freedom, but of each individual's peculiar form of it, who have never believed in a universal form and means of knowing and believing, nor in a single infallible method of achieving them, what can we do but assume that this higher spirit of knowledge will reveal itself in each one in a peculiar way? How can we assume aught else (and prove it by our institutions) than that the process can by no possibility be regulated in a mechanical way, but must in all respects reveal the character of freedom? Hence we cannot but deal with everything that pertains to it in an extremely delicate manner."

4. *Experiences under the Principle of Compulsory Studies.* Because in spite of all that has been said the idea will scarcely become extinct that it must be possible by some means of gentle compulsion to limit laziness and propagate industry, I shall, in conclusion, mention some of the experiences of other nations in this field, for the use and profit of future defenders of the principle of freedom.

At the Austrian universities the old system of compulsion with required attendance upon certain lectures, more especially general philosophical courses, was in vogue from the time of the old Jesuit organization down into the nineteenth century. In 1781, Friedrich Nicolai, the distinguished Aufklärer of Berlin, had occasion to observe its effect at the University of Vienna; what he saw is thus described in the record of his travels (IV. pp. 57 ff): In the philosophical lecture room there were about 200 hearers; the lecture was good, interesting and comprehensible, but the listeners behaved themselves like boys. "Some were lying on the benches, others chattered, others gaped about like children, others dozed. All this is allowed, but in order

that these budding lovers of wisdom shall not become too noisy and disturb the professor, a mature student known as the *fiscus philosophiae* is seated behind a railing, beside the lecturer's desk, and rises, whenever the noise becomes too great, and reminds the students of their obligations to the teacher."

The compulsory system also continued in vogue in the old Bavarian university. The second volume of Friedrich Thiersch's work, *Ueber gelehrte Schulen mit besonderer Rücksicht auf Bayern* (1827), is principally devoted to the demonstration of the inefficiency of this system, with its enforced attendance upon lectures and its "cramming" for the examinations, and to proving the necessity of adopting, for the revived university of Munich, the system of freedom in vogue in the northern institutions.

From Erlangen we have a report by K. von Raumer (*Geschichte der Pädagogik*; IV. pp. 240 ff) on the result of enforced attendance upon the philosophical lectures and the examinations connected with them, the so-called *Fuchsenexamina*; also one on the establishment of a board in Erlangen for the superintendence and guidance of the students of theology, which consisted of a professor assisted by four tutors, one for each year of the course, during 1833-1848. It was no less hateful and repugnant to the diligent student than to the lazy ones. He concludes: "We cannot be blind to the fact that the students look upon every attempt at superintendence and control of their studies by the authorities as an interference with their freedom, and therefore oppose it, no matter how well meant it might be."

A really typical example of a university course arranged with regard to pedagogical considerations is supplied by the French law faculties. There is a rigid curriculum in which the courses are prescribed for each year; there can be no chance of error in the choice of a teacher either, since there is always only one teacher for each subject; the instruction must be in accordance with a program which the instructor formerly received, complete, from the ministry of education, but which he must now submit to it for approval; attendance upon lectures and exercises is compulsory; an annual report of his progress is sent to the student's father (*bulletin scolaire*); finally, there is a graduated series of examinations, intimately connected with the

several courses: they are held annually in two parts by the professors, and in order to promotion to the next highest course they must be passed successfully; the examination is always only upon the work of the preceding year. And the result? With such scholastic rigidity it might be supposed that the average results could not but be highly satisfactory. But according to L. von Savigny's report (*Die französischen Rechtsfakultäten*, pp. 187 ff), which no one who expects anything from examinations during each semester should fail to read, even the purely external results are far from satisfactory. The percentage of failures is considerable; varying among the different faculties from one-third to one-ninth, it averages from one-fourth to one-fifth. Owing to the frequency of the examinations and the little time lost by failures in any one of them (early opportunity for re-examination is allowed), failure to pass is not taken seriously, is not looked upon as a serious catastrophe, as with us, but only as requiring a longer term in a class. The dean of the Parisian faculty thus describes the work done: The good papers are the exception; about one-third of the whole fairly good, and the great majority average and poor; many of the examinees are culpably ignorant, not a few enter the examination only for appearance' sake, without giving a single answer, merely to satisfy the requirements; a deplorable situation for the examinee, but more so for the examiner, who must sacrifice time and strength for the sake of a comedy. And how much time! In Paris each professor is compelled to devote from 400 to 600 hours annually to examinations, 6000 examinations being given.

I do not think we have cause to look with envy upon such results. But the effects of the system extend even further. The purely scholastic character of the examinations exerts a reflex influence upon the instruction given and the character of the work done by the students; these also become scholastic. Independent work and thought is never achieved, scarcely aimed at; the object is to learn by rote with the examinations in view. Hence the schoolboy-like way of looking at things that characterizes the student to the end, appearing even in the work done for the doctorate: mere reproduction, without any real independence and productive power.

Von Savigny thus closes his report: "If we must choose be-

tween the German system of uniting professional education with research work and the French system of their separation, we unqualifiedly adopt the German view, which seems to be more successful for scientific research as well as more truly and permanently advantageous for the professions."

And what about Russia? Here also are to be found official programs for the session; attendance is compulsory, and at the close of the year examinations are held and reports are made. And the result? One who is familiar with Russian conditions describes it as follows (in a book: *The Reform of the Russian Universities by the Law of 1884*, Leipzig, 1886): "The complaint is general that even after the middle of November the lecture rooms are deserted. From New Year to the end of February, a slight increase of the attendance is noticeable; but after that the preparation for the examinations leaves little time for lectures." "Lithographed lectures" play an important part in the entire system; they are bought at a stiff price and receive official recognition: the professor himself reviews the stenographic reports of his lectures in order to use them as a basis for the examinations (pp. 99 ff). There is, in addition, interesting but not very edifying information concerning the manner in which the examinations are conducted.

In conclusion a report from England and another from the United States. In his work on *Higher Schools and Universities in Germany* (1874), Matthew Arnold quotes from Laboulayes as follows: *Le pays à examens, l'Autriche, est précisément celui dans lequel on ne travaille pas*. He adds: "I do not say that in countries like Austria and England, where there is so little real love for the things of the mind, examinations may not be a protection from something worse. All I say is that a love for the things of the mind is what we want, and that examinations will never give it." And his conclusion is: "The French university has no liberty, and the English universities have no science; the German universities have both."

J. M. Hart, the American, in his work on *German Universities*, draws a parallel between the relation of the German professor to his hearers and that of the American professor to his students. "The chief drawback to the lot of a professor in America, namely, police-duty and discipline, does not exist in

Germany. He lectures only to those who are willing and able to hear. His relation to his hearers is that of one gentleman speaking to another. He is not in perpetual dread of hearing himself nicknamed, or seeing his features caricatured; his domestic repose is not disturbed by midnight serenades."

All of which goes to show that the infallible system which makes all the students reasonable, industrious and virtuous has not yet been invented; the German system of freedom does not do it. But the systems of restraint, supervision, and examinations accomplish as little; even the most careful precautions are unavailing. On the contrary, it is a question whether the strongest and most capable students who thrive under the free system, are not the very ones who would suffer under the system of restraint, and whether this latter would not be a worse injury than the former. Let it be admitted that our system is unsuitable for twenty or thirty out of every hundred who are not capable of freedom and never learn to use it aright. Suppose we changed it for the scholastic system, which also is unsuitable for from 10 to 20 per cent., but the 10 or 20 per cent. upon which our strength and hopes are based, the most independent, efficient and freest personalities: would we have gained by the exchange?

5. *The Length of the Course.* Since the close of the eighteenth century the length of the course in Prussia has been officially fixed at three years. And so it has thus far remained, except that three additional semesters were subsequently added in medicine, and more recently a fourth. For the jurists also a seventh semester is spoken of, to be secured, however, by a corresponding shortening of the practical probationary period. In Bavaria the *quadrennium* has long been the standard, originally on account of the shorter gymnasial course of eight years which prevails there; the first year at the university was intended to supplement the general scientific studies in the philosophical faculty.

As a matter of fact the length of the course in northern Germany everywhere exceeds the prescribed limits. In Prussia statistics show that, for the years 1886-1888, it was, for Protestant theologians 7.85 semesters, for Catholics 10.70; for jurists, 7.47; physicians 12.16, and for philosophers 11.16.

After the university course comes a more or less lengthy period of practical preparatory work. In Prussia, heretofore, a preparatory service of four years' duration was prescribed for the jurists, which, also as a matter of fact, was regarded as a kind of substitute for lost semesters at the university. For the head-masters the older arrangement of a trial-year has recently been extended by adding a year of practical pedagogical education in a gymnasial seminary. For the theologian also a probationary year has come to be regarded as necessary. Finally, by the new examination regulations of 1901 a year's course of practical training as an assistant in a university clinic or in a public hospital has been introduced for the physicians.

In the faculties there is, generally, an inclination to have the official period of study lengthened. This is true, especially, of the theologians and jurists. But particularly urgent has been the demand that the year of military service be not included in the *triennium*.¹ And it must really be acknowledged that, under present conditions, this year is lost so far as study is concerned; also, that the remaining *biennium*, abridged by military exercises, is not sufficient for the completion of a real scientific course of study. It must, therefore, be admitted that there is good ground for the recently established rule of the law faculty that the year of service shall be considered equivalent only to one semester.

On the other hand the opposition of the practitioners to any increase of the official period of study, especially by a refusal to count the year of military service as a part of it, is easily understood. So long as others, who do not do military service, can get credit for whole semesters spent in idleness,—something we are unable to prevent—so long it will be regarded as an injustice not to count the year of military service, a year spent in earnest fulfillment of duty, and having great significance for the development of character and individuality.²

I should, furthermore, like to mention a general objection to lengthening the official period of study: the still further post-

¹ M. Kähler, *Die Univers. und das öffentliche Leben*, pp. 31 ff. Goldschmidt, *Rechtsstudium und Prüfungsordnung*, *passim*.

² Kähler is perfectly justified in demanding assistance even beyond the sixth year for those who do military service. And one thing

ponement of the student's entrance upon an independent career. In former times an efficient young fellow frequently secured a position and made a living for himself, even before he was twenty-five years old; at present he often does not arrive at this goal, even under the most favorable circumstances, before or even after he has reached his thirtieth year. Under the influence of the final examination system, the school course has constantly been lengthened, until now the average age of those taking the examinations is twenty years; the university course, on account of the year of military service, has also been lengthened; to all of which must be added the year spent in preparing for the examinations. Then follows the period of practical preparatory service, and finally, in many instances, a more or less extended time of waiting while working at half-time and or half-pay.

The effects of such conditions are unpleasant in every respect, both for the individual and society. Aside from a point already considered (p. 128), namely, the narrowing of the circle from which the student body is drawn, the following must be taken into consideration. The strength and desire to begin an independent practical career are at their height at about the age of twenty-five in a normal nature. The courage to try one's powers at important tasks, and the ability to improve oneself and increase one's powers by means of such activity, are never greater than at that age. After thirty they already begin to diminish; courage and strength to make opportunities and to use them; as well as ability to turn failure into success, are on the decline—youth is the time to butt one's head against the walls of difficulty, later in life the business is too painful! There can be no doubt that the sum total of national capital in strength and efficiency suffers grievously on account of this belated use; what might not all those young men achieve who now waste the best years of life in inadequate occupations and positions, if only they had elbow-room for their pent-up energy. Take a man like Alfred Krupp, the founder of the iron works

more: The rule compelling a man to take lectures and pay for them during his year of service ought to be abolished as opposed to good morals. If on other grounds students are relieved of this duty, then military service is the most legitimate ground of all.

at Essen: what labors and struggles already lay behind him when he reached the period of life at which the university graduate still does gratuitous clerical work as a referendary or assessor or enters upon his probationary years as a candidate for a teacher's position.

And for the individuals themselves these years of unwilling fallowness frequently become actually painful. And when, in addition, it becomes necessary to scrape and bow, to dance attendance and cool one's heels in waiting rooms, to submit to pitying or rude refusals, this experience becomes a veritable purgatory for a proud, high-minded man. Many a candidate for a teacher's position has probably cursed the day when he concluded to study; with wounded pinions, worn out by waiting, angered, and embittered, he finally enters upon his chosen career, a career which, more than any other, demands a fresh and cheerful disposition if it is not to become a torment to himself and those entrusted to his care. And one thing more—postponed independence means a postponement of family obligations, or renunciation of them altogether. It is not necessary to go into details concerning the many evil effects that result from this.

6. *Vacations.* In the discussions on the extension of the period of study the practical men have most frequently pointed to the fact that such an extension could be secured by a shortening of the vacation periods. At present, it is held, they are unnecessarily prolonged, occupying almost six months of the year; the needful time for study, therefore, might be obtained by a more intensive use of the *triennium*.

And, in truth, the vacations are long, and there seems to be a tendency to make them still longer; docents and students are engaged, in a *circulus vitiosus*, shortening the semesters; the former do not care to lecture to empty benches, the latter cannot stay to the close, especially when one course of lectures has come to an end. Modern metropolitan life and the love of travel do the rest; the former has led to the monthly system of rents for rooms instead of the old semester plan; the railroad makes it possible for the student to go home at each vacation; and, by means of cheap excursions, also tempts to premature departure. So it has come about that the academic vacations

which, during the eighteenth century, when they received their present form with the semester arrangement, only occupied a couple of weeks between the two semesters, have increased to twenty weeks and more; six to seven weeks at Easter, eleven to twelve weeks in the fall, two weeks at Christmas, and one week at Whitsuntide.

That the excessive extension of the vacations has become perilous to study is not doubtful to my mind. If they are looked upon merely as a time set apart for rest, and the very name seems to invite this view, they become a dangerous school for idling. The attempt of the administration to prevent the continuous shortening of the semesters therefore seems entirely praiseworthy to me, meagre though the results may be. It would, perhaps, be most feasible and proper for the rector, by means of a circular letter, to call the attention of all the docents to the official time for opening and closing the lecture courses and request them to act accordingly. I should not care to maintain that the license now in vogue is essential to academic freedom.

But neither do I care to argue for a considerable shortening of the vacations. The ideal would be to make a better use of them rather than to decrease their length. The significance of the academic vacations, in distinction from others, which are generally intended for recreation after hard work, of course lies in the fact that, besides the indispensable recreation, they supply time for connected scientific work. For this they are especially useful to academic instructors; a large part of the necessary scientific work is certainly done in vacation, and some of it is only possible at that time. But for the student also, on account of the absence of the diverting and distracting, though perhaps not very fatiguing work of the semester, they supply uninterrupted time for independent work. The question is, will he learn to use it aright?

The problem is easiest for those whose studies are concerned, in the main, with literary materials. It is more difficult for those who have to work with extensive apparatus, as is the case with the medical men and natural scientists. But with them, too, the scientific literature plays an important part. And time will also be needed for quiet reading along general scientific

and philosophical lines. From this viewpoint, likewise, the possession of books appears to be indispensable.

Moreover, the university could take more interest in vacation work than it does. The vacation courses, offered here and there, could be expanded in various directions; they were first introduced in the medical faculty, but have gradually also gained a foothold in the philosophical faculty. They can do good service not only for men in active practice who return to the university in order to keep in touch with the progress of science, but also for students approaching the end of the course. More laboratories could likewise be kept open during vacations. For example, the various laboratories which are filled to overflowing during the semesters, could be kept open under the direction of assistants. Surely, many an older student, and perhaps also many a practitioner, who now lacks ways and means for difficult research work, would seize upon such an opportunity. Young doctors, also, would find here a field for profitable labor, if, as vacation-directors of a seminar, they could offer advice and guidance to enquirers for a couple of hours each day; a modest remuneration from the seminary fund would be sufficient to secure competent men for this purpose and would earn good interest, for there are always hundreds of students at the great universities in the large cities during vacation.

One thing more: the vacation periods could be utilized to bring the student into active touch with professional practice. The theologian has opportunities for preaching; the medical student will readily find grateful acceptance of his offer to share the practice of an older physician; and the law student also will find opportunities to do some modest work in his line. The philologist can find opportunities to teach everywhere. The natural scientist can get into desired and instructive touch with the technical side of his department, for scientific expeditions and trips are important means of culture for him.

7. *Choice and Change of Universities.* Ancient custom in Germany prescribes that a student shall not complete his academic education at one university, but shall attend several in succession. In other countries it is the rule to remain for the entire course at one institution. It is so in England and

America, and in the Scandinavian countries: with his matriculation the student becomes a permanent member of the university. He at the same time enters a *college* or a national union to which he will belong for years; and as a graduate he becomes a permanent voting member of the university.

Useful though such permanent relations are, the custom of academic migration, when kept within proper bounds, must still be regarded as a good one and beneficial from an educational point of view. It is true, these bounds are now not infrequently transgressed. A student who in three or four years passes through five or six universities will feel at home at none and will scarcely be able to do quiet and profitable work. But to attend two, three or even four carefully selected universities will prove helpful in more ways than one, both for one's general and scientific education. For one's general education, because there is no time like the years spent in academic study in which contact with other human beings and conditions is so fruitful for broadening the mind and cultivating the character. And we Germans have a particular incentive to travel, for this reason: Germany consists of two parts, north and south, quite distinct in stock as well as in creed, social conditions, political views, and finally in geographical conformation and means of communication. No better opportunity offers to know the other half of our country than to spend a couple of semesters there with open eyes. It is much easier to mingle with fellow-students and the people in the student days than later in life. This movement between the universities north and south, which has become reciprocal during the last few decades, after having been preponderatingly from the north to the south for a long time, is not without its significance for our entire national life as well as for our sense of political unity. By means of this academic migration the universities still exemplify in the concrete way the unity of the German people.

But a change of universities is of importance also to scientific education. What the years of travel of the journeyman were for the old handicrafts, the academic "wander-years" are for the student; he learns how things are regarded and done in other places, and thus gets away from the narrowing

influence of schools; he gets into touch with a number of distinguished men in his science, and thus enters upon a freer and deeper relation to it.

This, too, ought to be added, that such a transplanting to other soil may mean a liberation from all sorts of confining and depressing influences and conditions which it would be difficult to achieve in one place; it not seldom happens that a change of universities assumes the character of flight from one's environment and even from oneself.

The choice of universities will naturally be determined by particular conditions, such as personal and family circumstances and the method and purpose of study; or the attracting power of a professor, or of a circle of comrades, or even the scenery of the country may be the determining factor. I will merely add a remark about large and small universities. The advantage of the large universities lies in their better equipment: here are to be found the great institutes and collections, as well as a larger number of distinguished teachers. The intellectual atmosphere is also usually more stimulating in a large city; the stagnating atmosphere of little towns is dissipated by the keener air of public life, the student is delivered from the narrowing influence of petty interests. On the other hand, the small university offers advantages that are not to be despised. The smaller number of students readily permits a closer relation to the instructors, who are less occupied by the duties of their office and all kinds of diversions. Generally, also, the instructors will be younger men who, in the first flush of professional enthusiasm are more open to intercourse with youth. And who would be so pedantic as to count it a reproach that the poetry of student life—for there is a real and enjoyable poetry of student life—is possible only in the small town?

From all this the following considerations suggest themselves to the individual student. Generally, it will be wise to begin with a small university, either at home or in a different section of the country. When circumstances permit, it seems to me altogether desirable to go away from home. It will be time to think of a change after a certain degree of familiarity with university life and study has been obtained, which is pos-

sible in a place where freer access can be had to the instructors and all university arrangements. Then, perhaps, one of the large central universities will be selected; new impressions stimulate, distinguished teachers and investigators open new vistas into the world of science, libraries and institutes of all kinds attract with their richer equipments. The last semesters will of course be spent at the university where one intends to take the examinations, returning for that purpose, perhaps, to the first one. From this point the transition to professional life will be the easiest, and at the same time the individual will keep in active touch with the university in the practice of his calling.

It would be specially helpful to spend, if possible, a semester or two, after the completion of one's studies and examinations, at a large, or better still, at a foreign university. The academic *peregrinatio* to Italy, France, and the Netherlands, is not so customary now as in former centuries, partly because our own universities make such supplementary study less needful for the student than formerly, and partly because the practical preparatory course keeps him at home. It more often happens, however, that foreigners, after completing the course at home, attend the German universities, a distinguished testimonial to their efficiency. But we ought not to let the former custom die out; it will help us to guard ourselves against one-sidedness and isolation. For the student of modern languages it is absolutely imperative to study the language and customs of a people in their own country. And if in this way we could develop a little love and appreciation of foreign manners and life in an age which is so puffed up with national hate and self-conceit, it would be a beautiful addition to the other advantages. The classical philologist and archæologist, as well as the historian, will, first of all, be attracted to Italy and Greece, to learn by sight what can only be learned that way. Our young physicians go to Paris and London, in order to study the art and science of healing and sanitary systems of all sorts where they have been cultivated longer. Theologians and jurists do not go abroad so much; but a broader outlook upon human affairs would be useful for them also: the theologian who has lived in a country where religion is not a matter of the state and

therefore is less interwoven with politics than with us, will return home with more confidence in its ability to sustain itself without such aid. And the jurist also will be better protected against the danger of growing dull in the routine of duty and the atmosphere of militarism if he has seen political and social life abroad in different forms.

CHAPTER III

THE AIM AND MEANS OF STUDY

1. *The Aim.* "It is the glory of Germany that she has seen more clearly than other nations how truly the highest scientific training is none too good for her public servants." It is thus that an American, Professor Perry, characterizes the ideal of German university study. And that is actually its purpose: to base professional study upon a true scientific education. We cannot hope, and can scarcely desire, that all students should become actual *savants*, co-workers in science. But we do regard it as essential that all should come into immediate touch with science itself by means of a residence, through several years, at one of the centers of our scientific life. We are convinced that prolonged and daily intercourse with men and youths devoted to science, is the best way to lead even those who are not destined to be actual scholars to a higher conception of their life-tasks, and to provide them, at the same time, with the necessary scientific knowledge for their professions.

The aim of the course of study can now be more definitely described. It is threefold: (1) scientific professional knowledge; (2) ability to do independent scientific work; (3) philosophical culture. Whoever carries these three things away with him from the university can rest assured that he has spent his time there to good purpose.

As to the first: scientific professional knowledge. This means a confident mastery of the fundamentals of one's professional science and an insight into its essential aims. It includes, a knowledge of the essential facts and their scientific interpretation; insight into the main problems, especially those on the solution of which the science is just now engaged; and, finally, familiarity with the historical development, which also

demands a knowledge of the most important phases of the literature. These are the things to which attention is especially directed in the examinations.

As to the second: ability to do independent scientific work. This means, ability to pursue scientific investigations, to pass judgment upon them, and, most of all, to inaugurate and carry them on oneself. The purpose of study is not merely to learn and take in, but to acquire an independent judgment, and, when possible, to do independent work in science. Although this latter is not attainable by all and in all things, the former is indispensable: he who cannot independently develop knowledge, with its presuppositions and grounds, has no scientific insight, but only opinions based upon trust and belief. Independent judgment presupposes the possession of a method with which facts are ascertained, ideas formed, and propositions proved, hence the acquirement of such a method is one of the necessary aims of scientific study. The desire to co-operate in scientific work will accompany the acquirement of the method: a tool with which one has become familiar is an incentive to work. And such permanent occupation with scientific work would be the final test of the problem of academic study.

H. von Sybel has characterized this idea capitally: the purpose is not to learn the entire compass of science from its ultimate sources, for that is impossible. "But it is essential that the student should become distinctly conscious of the problems of science and the methods by which they are solved; it is necessary that he should employ these methods in a few directions, or at least in one, that he should follow some of these problems to their ultimate consequences, to a point at which he can say that there is now no one in the world who can teach him anything about it, where he can stand firmly and securely upon his own feet, and can decide according to his own judgment. Such a consciousness of independence achieved through one's own efforts is of inestimable value. It is practically immaterial what the subject of the investigation was which led to this: it is enough that, in one field, no matter how unimportant, dependence upon the school was done away with; the powers and methods have been tested with which henceforth every new

problem can be attacked and carried to a like solution. The boy has been brought to maturity in the very spring-time of youth."

In the third place: philosophic culture. Upon leaving the university the foundation for an intelligent personal theory of the world and life should have been laid. The foundation should have been laid: "for the theory will scarcely be complete; life is the final teacher of philosophy. But this is expected, or ought to be expected, that during the course reflection upon ultimate questions has begun, that philosophy has been earnestly studied, that there has been a real search after fundamental principles. Mere specialistic knowledge of science, without philosophy, entitles no one to number himself among the leaders of the people; for this the possession of controlling ideas is needed, ideas concerning the form and meaning of life, and of reality in general.

Such is the three-fold aim of study; and the task which it sets is, therefore, also three-fold: to learn, to investigate, to philosophize. To learn: to assimilate, through one's own efforts, existing knowledge; to investigate: to pursue existing knowledge, at some one point, to its ultimates, or to go beyond it; to philosophize. to round off one's knowledge into a complete whole and interpret it by principles.

And here we may again specially emphasize what is really self-evident, that all scientific study begins with learning. There are always young persons who imagine that they can skip this stage and plunge at once into production. And this occurs in two ways: there are always restless minds eager to reform science before they have learned it; philosophy is especially plagued with them. And on the other hand, there are individuals who, before they have fairly looked about in the domain of their science, bury themselves *instantly*, like a species of learned mole, in some problem or other in order to solve it by means of acute penetration or wearisome industry.

Fichte, in his third lecture on the vocation of the scholar, which deals with the incipient scholar, particularly with talent and industry, makes some remarks that are worth reading about the first kind of persons named above. "Contemplation, admiration, and praise of oneself—even though the latter be always internal—and the indolence which springs from them,

as well as the contempt for what already exists in the storehouse of culture, surely bear testimony to lack of true talent: to forget and lose oneself in the subject, and to become so immersed in it as to be unable to think of oneself, is the inseparable accompaniment of talent." And concerning the productions of those false geniuses, "whose tremendous pride and self-conceit and desperate determination to pass for something out of the ordinary in spite of nature," serves them as an incentive instead of real genius for the matter in hand, he has this to say: "their production is either something which they have independently thought out, or which happened to occur to them, and which they themselves really do not understand, but which they hope, nevertheless, will seem new, striking, paradoxical and, therefore, become famous, and which they now launch upon the world, hoping that somehow either they themselves or someone else will discover sense in it;" or the thing is borrowed but rendered unrecognizable by artful distortion and transposition, and made to appear as something new.

2. *The Means of Study.* I shall discuss, first, the means of study offered by academic instruction, namely, the lectures and exercises. Their nature and forms have been discussed in the second chapter of the preceding book. Here I shall briefly treat of the use which the student makes of them.

First, let us consider the lectures. As we have seen, their significance lies in the fact that, in a series of discourses, they offer him who seeks access to a science a bird's-eye view of that science as it has shaped itself in the personality of a particular teacher. The science is presented to the hearer as the function of a living personality, hence the vital force which emanates from the right kind of lecture: it secures interest in the subject and confidence in the science more easily and readily than a book.

The hearer's task will be, therefore, with open mind and individual thought, to assimilate and digest what is thus offered him. He will not confine himself to mere listening and passive reception, but will allow himself to be aroused by the discourse to become a fellow-worker, to secure a vital grasp, and achieve an independent solution of the questions. It will not matter if he assumes positions more or less different from those of the

teacher; critical reflection is the student's privilege; he is a bearer, not a pupil. The teacher will actually wish to lead his hearers into a kind of mental discussion with himself. Nor will anything prevent these inward discussions of the views advanced in the lectures from becoming outward and audible. Of course not during the lecture, for it would thereby become disconnected and lose its effect, but very well afterward, whether in the form of verbally expressed questions and doubts, which may be attended to at once in personal interviews, or in the form of written questions, which, when it can be foreseen that they reflect the mind of a majority of the hearers, may lead to a review of the subject at a subsequent hour. He would not be a true teacher who would not willingly discuss such questions with his hearers. Especially lectures before a small number of hearers, which are common at the smaller universities, could in this way assume an intimate and personal character and become unusually effective. Could not the complaints of the unfruitfulness of the lectures, which generally come from the small universities, be most effectually silenced in this manner? I do not see why the teacher himself should not provoke and encourage questions and doubts when they do not come spontaneously. A professor who has an audience of five or ten before him would, it seems to me, increase both his own interest and that of his hearers in the lecture, by devoting a part of the time to such dialogical intercourse with them; naturally, however, not in the form of scholastic quizzing, for that the student will not tolerate; the questions must be put to his judgment, not to his memory.

Taking notes of lectures is an old survival. I see no reason to reject it. It is easy to scoff at it; Mephistopheles assumed this tone in the well known lines, since then repeated numberless times and with many variations:

Doch euch des Schreibens ja befeisst,
Als diktirt' euch der heilig' Geist,

and the pupil stupidly accepts the advice:

Das sollt ihr mir nicht zweimal sagen!
Ich denke mir, wie viel es nützt;
Denn was man Schwarz auf Weiss besitzt.
Kann man getrost nach Hause tragen.

Certainly the aim is not to take down a dictation mechanically, to secure the "*Schwarz auf Weiss*," to learn by rote from such notes the answers to future examination questions—a custom which has not yet died out; such a practice has, of course, no value, none, at least, other than security against accidents in the examinations. But there is also another, a more judicious way of taking notes, which retains and formulates, not the words, but the thoughts and their connection. In effect it gives the matter of the lecture in a worked-over form: the arrangement is emphasized, the principal points are fixed, and the thought as a whole is presented in abbreviated form. At the same time, the attention is kept alert and increased: the hearer's activity prevents him from going to sleep, even sleeping with his eyes open, which easily happens during mere listening.

Thus the taking of notes has its value even when the notes are never looked at again, very much as an excerpt attains its purpose merely by having been made. And it may well happen that the notes, like an excerpt, may be of value for a further review and study of the subject. My notes of Bonitz's lectures upon Plato and Aristotle, for example, have frequently been of service to me.

One thing more: the taking of notes in a lecture is a preparation for work which later life not infrequently demands of one; I mean making notes of a discussion, or an address, or a lecture, by taking down the main points. Schopenhauer refers to his notes on Fichte's lectures as protocols, with scornful emphasis; he must have felt like a judge at a hearing. Well, to take down a protocol must also be learned. Taking notes, therefore, even though it has no other value, can certainly serve such a purpose.

The lecture will acquaint the hearer with the present status of a science by presenting its most important facts and fundamental problems, by stating the different theories which have been offered to explain them, by tracing the historical development of those theories, and showing their present relative value. The acquisition of general concepts for the comprehension of things may perhaps be regarded as the most important gain. The idea, therefore, is not to have the entire matter of a science delivered to one by means of lectures. Hence it will by no means

be necessary to hear special lectures upon all the divisions of one's department. If a historian, or philologist, or natural scientist should attempt to hear all the special lectures upon his subject which are offered at a great university, he would certainly be overwhelmed.¹

3. *The Exercises.* The purpose of the exercises, which the nineteenth century has produced in such a variety of forms, is, in the main, to guide the student to independent scientific work. While the lectures are primarily intended to instruct, the exercises serve to fulfil what we found to be the second purpose of the course, namely, to introduce the student to scientific research. This is especially true of the seminars proper: they are the nurseries of research; their particular service is to familiarize the student with practical scientific methods. The method of solving problems varies with the various fields of research, such as history, philology, natural science, or mathematics. In general, however, an expert in research gives a problem to his students, or encourages them to find such problems for themselves, and the work of solving it is then done under his guidance; expert criticism and advice are at the service of the halting endeavors of the inexperienced. Thus they learn to know and handle with skill the tools and methods of work. The aim is to make the pupil himself a master, hence, first of all, to enable him to do independent scientific work; the dissertation is intended to be the proof that he has acquired the necessary ability.

It must be self-evident that no one who seriously desires a scientific education can afford not to participate in these exercises. Even he who does not intend to devote his life to learned research, but is by inclination, endowment, and circumstances destined for a practical profession, ought not to miss the opportunity to learn from a master-hand something

¹A *bon mot* of Antisthenes, preserved by Diogenes, may be in place here. He was answering a young fellow who wished to hear him lecture and had asked what the requirements were: "βιβλιαρίου καινοῦ καὶ γραφείου καινοῦ καὶ πινακιδίου καινοῦ, τὸν νοὸν παρεμφαίνων," adds Diogenes by way of explanation. Every student, entering the lecture-room for the first time, should have this saying inscribed upon the first page of his notebook.

of the methods of scientific work. Nor should he neglect it to whom the work of a seminar seems strange, insignificant, of little or doubtful value. It is by all means wise to become acquainted with the current methods by actual practice, even though one feels an inward call to something higher. It is in the associated work of the school-room that one first becomes cognizant of one's powers and learns how to value them, and, by comparison with the work of others, acquires self-assurance. The self-taught man usually carries about with him a kind of uncertainty, even when, on the whole, he esteems his powers and deserts rather highly; or rather, the over-estimation so common in his case, is really the result of this inward uncertainty. He should take to heart these suggestive lines from Herder:

Lerne die Lehren der Schule! Doch gleich der Leukothea Binde,
Bist du ans Ufer gelangt, wirf in die Flut sie zurück.

Another important point is, not to postpone participation in the exercises too long, but to gain admission to and share in them as soon as possible. A variety of courses are now offered, especially in the philosophical faculty, that are adapted to beginners. These exercises give at once just what the beginner most needs, a definite direction to his work. They fix his attention upon some particular point; and it is of decisive importance that he should do this, that he should take hold of something definite. It is not so important to begin at the right place as it is to secure a firm foothold somewhere. Otherwise there is danger of prolonged distraction between various interests with final inability to do earnest and successful work anywhere.

And here I must remind the reader of another thing, already touched upon a number of times: one ought not to discontinue, at the university, the practice one gets from writing brief essays, such as are demanded in the upper grade of the gymnasium. And this, if for no other reason than that they are frequently called for in the examinations. Any one who has had occasion to examine the papers presented, for example, in the examinations for head-masters, has often been confronted with great and sometimes almost incomprehensible ineptitude. Often

there is entirely too much prolixity; an ill-assorted mass of books has been read, a mass of excerpts has been gotten together from them and patched up into a poorly connected whole. Instead of sitting down and thinking the matter over and collecting his thoughts, the candidate foolishly gave himself over to much aimless reading, apparently with the idea that to do "scientific" work, one must first of all have read, or at least handled, all the books that were ever written on the subject, and, to show that this had been done, to quote something from each. If the practice of condensing the exercises into brief explanatory and critical essays had not been neglected for years, the examinations would be more successful. Meditation, method, arrangement, style—all these things get rusty by long disuse. It would not be a thankless task for the younger docents to give instruction in and opportunity for such work. And this is an inviting and fruitful field particularly for scientific societies; I will refer to it again.

4. *Scientific Literature.* Its use in connection with academic instruction is at present a necessary and essential part of study. The aim should be to become, through practice, familiar with the most important things in the literature of one's specialty, in order to be perfectly at home in it.

The books can be divided into four classes:

(1). Text-books. The academic text-book or manual is intended to give a complete presentation of the facts of a science in a systematic way. It will be helpful to the student to supply himself at once with a good text-book as the basis for his own studies, to become as familiar with it as with a school-book, and to use others merely as he finds opportunity to do so.

(2). Works of reference. To this class belong encyclopedias, scientific lexicons, dictionaries, collections of material, archives, etc. In this instance the aim should be to become familiar by practical use at the university with these important aids in all scientific work. Even an occasional hour spent in the perusal of such works will not be without its results: one may learn, perhaps, where to look for things. And this will also supply information for later use; he who knows works of this sort is better able to use them from a distance, when he has no large library handy.

(3). **Original Sources.** These really form the substance of all the mental sciences: for the theologian, the sacred writings; for the philologist, the manuscripts of classical antiquity; for the jurist, the *Corpus Juris* formerly occupied a similar position. The aim here should be, by constant reading to secure a complete familiarity with these works. The best advice, which cannot be too often enjoined upon the beginning student, is, to read the things themselves, not books about them, or at least only in addition to and in connection with the sources.

Here I must add a word about a point already referred to: the purchase of books. Ownership is the presupposition for constant usage. It will therefore be the student's constant care to supply himself with good editions of necessary works. Books are the student's professional capital; and, as in every other instance, working with a scarcity of tools and insufficient capital is here also unproductive and unwise.

One cannot work with borrowed books as with one's own, because, in the first place, they cannot be treated as for one's own use by underscoring, marginal marks, and notes, etc. A book in which the traces of former work point the way during a re-reading or reference, greatly facilitates its use, and is, therefore, of double value. He whose means compel him to practise economy will watch for opportunities, such as auctions, for the purchase of second-hand books; in the centers especially it is possible to secure a sufficient collection of books at modest cost. Of course, the seminary library will be of assistance, especially in supplying the larger compilations and reference works for daily use. An adage from medieval school-lore emphasizes the importance of the ownership of books, something that is always undervalued by the student:

Haurit aquam cribro, qui discere vult sine libro.

(4). A fourth and last group deals with the history of one's own particular science. Science lives only in the historical process of its production, and no one can fully comprehend its status to-day without a knowledge of its past. Science may be likened to a tree: to-day's work is the layer of cambium in which the vital changes take place, but the wooden trunk is

also needful for the tree's life; similarly for science there is needed the old body of literature formed by the tradition of centuries.

In order to study the history of a science three groups of works are important. First, general presentations of a subject, supplying a bird's-eye view of it. For a beginning a brief outline of the essential points is to be preferred to the many-volumed works with their confusing variety of matter. Secondly, biographical, especially autobiographical works of men whose lives and labors marked the great epochs in the development of a science. They indicate the close connection of research with their personal life on the one hand, and with the dominant interests of the times on the other. Thirdly, selected classic investigations and pieces of work, namely, such as were epoch-making in their effect upon men's views. The theologian, philologist, historian, and even the 'natural-scientist, the physician, and the mathematician should not fail to pick out for reading or inspection some important epoch-making or typical work produced here and there during the centuries. The effect is quite different from that of an historical statement in that it brings one into immediate touch with the past; the spirit of the times is in such a book; an exposition, no matter how faithful, is always presented through the medium of the present and becomes modernized.

I emphasize the fact once more that not only the historical sciences, but also those which are dogmatic in character, are historical phenomena and can only be thoroughly understood and appreciated as such. It would be desirable if the student would show a livelier interest in such historical studies than is usually the case; it would also be well to beware against a too biased admiration of the modern and too great partiality for the newest theories. In his rector's address (1900) Harnack has admirably reminded us of the duty of historical study: "Do not neglect history, general history and the history of your science. Do not imagine that you can gather knowledge without becoming familiar with the personalities to whom you owe it, and without knowing how it was attained. No important scientific truth is a bald fact; every one of them has at some time been experienced, and this it is that gives it cultural value.

He who is content to know results alone, is like a gardener who plants cut flowers."

Goethe makes a similar demand: "Do not study contemporaries, but those great men of the past whose works have always been valued and esteemed through the centuries. A really highly gifted person will feel the need of this for himself, and such need for intercourse with great predecessors is precisely the indication of superior endowment." This is especially applicable to our own period, always so eager for the latest opinions.

5. *The Method of Reading.* Two things are necessary for useful reading: first, to understand and remember what the author thinks; second, to judge and make clear to oneself how the subject ought to be regarded, or, at least, what to think of it oneself. The former constitutes the fundamental type of philosophical-historical, the latter the fundamental type of dogmatic study. They are, however, indissolubly united, as a matter of course. A few hints may not be amiss to the young disciple of science; I fear that there is much fruitless reading.

(1) Read with pen in hand. Mere reading without the counter-effect of writing leads to nothing. But the pen serves a double purpose. First, to make excerpts or extracts. The contents are condensed into a single statement, by means of short, clean-cut formulas, logically arranged, which can be taken in with a single glance of the eye. Mayhap the margin of the book will suffice for such a summary. A book which has been worked over in this way also becomes impressed upon the memory; we remember what we have actively thought about. And for the purpose of reproducing a work such outlines are most convenient.

Annotating should also be practised. With a few strokes of the pen one's own ideas may be set over against the author's, in a kind of dialogue with him. Frequently just a word on the margin is sufficient to indicate the reader's position. Or parallel passages either from the same or other authors can be noted, or facts that make for or against the author's opinion, and so forth. Such searching and active reading helps one to understand and assists the memory: views about which one has

formed an opinion for oneself are impressed upon the mind by that process.

(2) Reading should be with a definite object in view. He who approaches a book with a definite question gets more out of it than he who merely reads in a general way and at random. Ask, and ye shall receive. It is so with nature; the physicist who puts her upon the witness-stand in the laboratory will hear her answer; *prudens interrogatio dimidium scientiae*. It is the same with books: quiz them and they will reply. The questions may be of many kinds; but primarily they divide as above indicated: those that refer to the subject and those that refer to the author and his works. Aristotle's writings may be read for the purpose of learning something about the nature of things or about Aristotle himself. In the one instance the interest is philosophical, in the other it is philological, though as already remarked, these do not necessarily exclude each other.

(3) Books should be read repeatedly. This will be specially necessary at the beginning, in order to lay a good foundation. It is necessary for two reasons: in order to understand and to retain what one reads. In order to understand: a book's beginning presupposes its ending; it was present in the author's mind as the goal to which he proposed to guide the reader. The reader, therefore, having reached the goal, will have to turn back to the beginning; and in order to understand the author thoroughly, re-read the book in the light of the author's purpose. Schopenhauer, in the preface of his principal work, impresses this upon the reader as the primary condition for understanding his book. 'This may safely be looked upon as the silent demand of every comprehensive and difficult work. Secondly, for the sake of retaining what has been read: it is only the re-reading, which awakens memories, refreshes, supplements, and combines them, that enables one permanently to make a book one's own.

Such would be the method of successful reading. Rapid, aimless reading of everything that comes to hand leads to nothing except a mass of uncertain reminiscences, an impaired memory, and a feeling of inability to control one's own intellectual stock of materials. * Here, as everywhere, it is the work

which is directed towards a definite end, which alone succeeds. As Rückert admirably expresses it:

Zwei Hälften machen zwar ein Ganzes; aber merk:
Aus halb und halb gethan entsteht kein ganzes Werk!

There is, however, still another proper way of handling books, namely, by a rapid perusal to secure a general idea of their contents and form. The works for ready reference which can now be consulted at our great libraries without much difficulty, invite the reader to secure this kind of familiarity with books. Something is gained by merely looking at the books and glancing over their tables of contents, to which one was introduced by name only in reading or lectures; such books mean, henceforth, something more than mere names, and a return to them is made easier.

6. *The Advantages of Coöperation.* They can be obtained in two ways: (1) by the coöperation of individuals; (2) by the organized coöperation of scientific societies.

(1) The private coöperation of individuals is a very fruitful method; when the participants in the work are well adapted to each other and mutually complement one another, there can be nothing more enjoyable and profitable. If it is a question of joint reading, four or eight eyes see more than two, because each reader looks at the matter from a different standpoint, and contributes different facts and interests. In addition, competition increases the interest: each wishes to forestall the other, to discover the treasure and exhibit it to the others.

Thus even tedious learning and repetition, things that cannot be avoided, may be transformed into a pleasant game by such mutual assistance. And to learn to read and write foreign languages is really impossible without the intercourse of living speech. Correspondence could also be made serviceable for this purpose: that which is occasionally attempted along this line between scholars of different nations, could perhaps be done more successfully between students; nor would the personal relations established in this way be without value.

(2) Scientific societies. These have recently been devel-

oped in a gratifying way and now constitute a means of culture that should not be underestimated. They are important, in the first place, as a means of bringing kindred spirits together; the society is the place where individuals learn to know each other, and that as workers; frequently ties are formed here which exercise an influence for life. In the second place, when the society has once won a permanent place for itself, there is built up in it a tradition of study which points out the way to the younger members and surrounds them with a wholesome atmosphere, while it encourages the older ones to further endeavors. In this respect even the "old gentlemen," as they are called, are an essential element of these societies. Furthermore, they form a link between the member and his calling, and, often, between him and the university; the older scientific societies often number a great many docents among their old members.

Among the kinds of work done in the societies, the lecture and the discussion following it, must be given first place. This will be useful, in any event, for the speaker himself; it compels him to fix his attention upon some given subject, collect his thoughts about it, and, while striving to make it intelligible to others, seek to understand it thoroughly himself. Whether anything is added to the knowledge of the subject or others are instructed or not, in any event the author himself is a gainer thereby, and that may in itself be considered a sufficient advantage to justify the exercise; it is so considered in the case of many a printed article! However, it cannot be said that lectures which benefit the hearers are rare. One of their own age can more readily make many things plain and interesting to his fellow-students than the rather more distantly related academic teacher.

On the whole it is best, whenever possible, not to read the lecture. It is not only easier for the hearer to follow the spoken word than a written address, but the speaker himself is benefited. He is compelled to emphasize the important points as strongly as possible, to mark out his line of thought distinctly and make directly for his goal. The spoken address, which, of course, presupposes written preparation, discards the inconsequential, such as superfluous incidents, paradoxes,

sophistries, artificial decorations and embellishments. Paper is more patient than a hearer, the pen more circumstantial than the spoken word; one can speak out only that for which one is willing to be personally responsible.

For the discussion it will be convenient to cast the substance of the lecture into the form of *theses*, and to demand that those who oppose it should put their ideas into counter-propositions. Else it may easily happen that the debate will not get beyond an aimless talking at cross-purposes and will not even assist the participants to a clear recognition of their differences. The medieval practice of limiting the disputation by means of logical formulas, undoubtedly had its advantages, even though it often happened that the real interests of the subject were sacrificed to the exaggerations of logic.

The evenings given to actual debating should, probably, be next in importance to those given over to hearing discourses. A question should be previously fixed upon as the order for the day, so that every one could be prepared to take a position upon it, and, possibly, talk it over with some one else. The discussion would soon reveal a number of view points, there would emerge a variety of fundamentally different opinions, illustrating at least the possible ways of looking at the subject. A formal adroitness in debate would also be attained by means of these exercises. Practice would increase one's ability quickly to comprehend the thoughts of others, to understand their grounds and motives, to assume one's own position with reference to them, to recognize and expose their weak points, to develop one's own views in their logical connection, to arrange them for the purpose of the argument: all these are things whose value we have for a long time, perhaps, somewhat underestimated. The growing demands of public life will obtrude their necessity more and more upon us.¹

7. *General Culture.* Besides a thorough preparation for one's own particular calling the university course, as we have seen, implies, in the second place, the broadening and deepening of the student's general culture. I shall very briefly refer

¹ Concerning the value of such exercises, see J. S. Mill's *Autobiography*, chapter 3. The entire book ought to be read. It is one of the most interesting educational histories we have.

to two points included here: acquaintance with related sciences, and the attainment of a philosophical world-view.

No scientific study can prosper in isolation. Every science is indissolubly related to others; they presuppose each other as auxiliaries. In order to supply oneself with the necessary helps at least a general knowledge of the related sciences will be indispensable. Thus, more especially, do the two great groups of sciences, the natural and philological-historical, constitute essentially undivided domains, from which particular sections emerge into what is only a relative independence. Philology and history can never be separated; nor can any portion of history or literature be handled apart from the whole. The modern philologist needs classical philology, and, on the other hand, he who wishes to understand the Homeric epos will not neglect the German epos; they are homologous growths which mutually illustrate each other. Neither can the theologian nor jurist do without history and philology; their subjects are segments of history, of the history of many peoples.

But just as little can the historian eschew a knowledge of religion and law, that is to say, the work of the theologian and jurist: what would be left of the history of a people after its religion and law had been blotted out? It follows that the entire domain of study is one because, in the last analysis, the subject of study is one: the history of intellectual life on earth. All lines of demarcation are merely provisional and are due solely to the division of labor imposed by man's limited powers: the task itself is one. The same is true also of the natural sciences. Nature and its laws are a unity, a cosmos, in which there are no dividing boundary lines; here also delimitation grows out of necessity and is merely provisional, destined to disappear with complete knowledge. All the most fruitful work tends to demonstrate the unity of hitherto separate sciences. Finally, even nature and the historical sciences are most intimately related, their thousand threads crossing and recrossing: human life is a phase of terrestrial life in general, which, in turn, is a phase of cosmical development; and, on the other hand, the natural sciences, like every science, exist only as an historical process, as a bit of historical life.

How shall academic study meet the demands thus made upon

it? - The school has prepared the way by supplying general information in all the important fields of knowledge, such as history and philology, mathematics and the natural sciences. It is the business of the university to build upon this foundation. This necessarily emphasizes, more than ever, the division of labor. But it must not be carried to the extent of isolation and alienation. To counteract this should be the special aim of lectures of a general character. Practically, the so-called *publica* are, in this respect, a not unimportant phase of university instruction; and they are much used and appreciated, especially at the large universities. Furthermore, the philosophical faculty still continues to be a general *nexus* of the sciences; its lectures are attended by students of all the faculties, the medical students preferring those on natural science, the theologians and jurists the philological-historical, and all attending the philosophical and historical lectures. But the fact must not be overlooked that the ever-increasing specialization, due to the increasing divisions of labor, is steadily making the task more difficult. I shall refer to this again (V, 5). I merely remark here that popular scientific literature takes the place, to an extent, of what was formerly done by the university lectures of the philosophical faculty, by supplying the results of scientific research in an accessible form. It will not be amiss to add that it would be wise not to depend too much upon the work of the professional popularizers, but rather to pay attention to the occasional contributions of the masters of a subject in the way of briefer addresses and articles.

8. *Philosophical Culture.* All sciences ultimately form a unity, corresponding to the unity of reality. If the universe is a single system, knowledge about it must finally achieve the form of a unified system of thought. Such a system, which pretends to embrace all reality in a final unifying thought and to explain it intellectually, is called philosophy.

This means that no one, who claims to be a scientifically educated man, has a right to be indifferent to philosophy. It is here that scientific knowledge first achieves its goal; in so far as we are impelled by the theorizing instinct we do not wish to know merely a fragment here and there, but to have a comprehensive knowledge of things in their entirety, to know their con-

nection and their meaning. It is only as we know its relation to the whole that the part becomes really significant; only he who can survey his science as a part of all related knowledge is secure against one-sidedness and overestimating its value. And from still another viewpoint every scientific thinker is dependent upon philosophy, namely, in so far as it investigates the logical-methodological presuppositions of scientific reasoning in general, and thus supplies the criterion of truth. With this in mind Kant declares it to be the purpose of philosophical instruction to supply the student with a second pair of eyes, so that in addition to his specialistic view of things he can also see them from the standpoint of philosophical criticism. This will enable him to estimate the importance and scope of his own science for knowledge in general, and at the same time fix its place in the sum total of human aims and purposes.

But just here a peculiar difficulty emerges: philosophy does not exist in the form of a science with a generally recognized content, but only in the form of various attempts to grasp and express as ideas the unity and significance of reality. Whether this is explained by the fact that reality is too broad and deep for our conception and too complex for our understanding, or by the great personal differences in the philosophers themselves, the fact remains that the different philosophies reveal an endless variety of conceptions of the universe. This also has its influence upon the study of philosophy. It is seen, among other things, in the fact that the text-book and manual is of much less significance here than in the other sciences, and that the study of philosophy is, in general, more divorced from the present; the great philosophers of all ages are its true instructors.

Kant says somewhere that philosophy has no classics. This is quite true, there are no standard thinkers, as, with respect to language, there are standard authors. But, on the other hand, it is precisely in philosophy, rather than in the particular sciences, that the classics are to be found, thinkers who do not grow obsolete, any more than the great poets. Scientific investigators and their works do become obsolete in a certain sense; they are superseded by further investigations until they are studied merely as a matter of historic interest. On the other

hand, the great pathfinders of world-thought, Plato, Aristotle, Spinoza, Kant, and whoever can maintain himself in such company, continue always to be the living instructors of philosophy; they retain their ability to incite one to think about finalities, and to guide one in so doing. They cannot, therefore, be superseded by the latest text-books. And this will also have a reflex influence on academic instruction in philosophy; less than elsewhere will it partake of the nature of an introduction to a more or less mechanically organized work; its chief aim will be to encourage the student to think and to enable him to appreciate the great masters.

The individual ought therefore to follow this advice: above all strive earnestly to become absorbed in the study of the great thinkers. The shortest way to philosophy is to take one of the masters for a guide and thoroughly understand his views concerning the world and life. By so doing one will most readily harmonize one's own ideas.

Such should be the aims of what is known as general culture. There should, perhaps, be added a final one: the student should not wish nor should he be permitted to be a stranger to poetry and art, for they also form an essential element of the intellectual life. Yes, perhaps it pulsates stronger in them at times than in the world of speculation. The clergyman, teacher, physician, or government official who wishes to stand in vital relation to the present, will, therefore, assume a sympathetic attitude toward the artistic creations of his day. He will strive to be able to pass judgment upon them, not, perhaps, the judgment of a technical expert, but judgment so far as they affect human life. It will therefore be unavoidable to pay some attention to these things even during one's course of study, especially since access to them is frequently not so easy in later life. It is, of course, self-evident that here also intimacy with the best, with the really great creations of all times, is more important than familiarity with the latest productions.

9. *Plan of Study and Method of Work.* He who approaches a great and far-reaching undertaking begins with a consideration of the ways and means. And inasmuch as academic study is a difficult and complicated undertaking, whose happy completion can only be brought about by thoughtful and purposeful work,

it will be well in this instance to determine in advance just what is to be accomplished, and to divide the time and strength at one's disposal accordingly. Thoughtless and aimless work, taken up on the spur of the moment, accomplishes as little here as anywhere else in life.

The goal is objectively and in rough outline described by the examinations, and these are, in turn, conditioned by the demands of one's profession. They may therefore be made the basis for a preliminary survey of the task. The next thing would be to devise a scheme of studies, by dividing the several branches of the course among the available semesters. In general the sequence of studies will be determined by the relationship of the individual disciplines to one another. The beginning should be made with the elementary and fundamental sciences, in order to advance to those that are built upon them. Thus the study of medicine will begin with the general natural sciences, with the biological and anthropological disciplines: anatomy and physiology supply the obvious basis for a knowledge of the life-processes; upon these rest pathology and therapeutics; and the practical work of the clinic brings the course to a close. In a similar way, though not so rigidly, the sequence of studies in the theological and juridical faculties is fixed in rough outline by the nature of the case: at the beginning are the fundamental historical-philological studies, then come dogmatical, and, finally, the practical courses.

In the philosophical faculty the situation is more difficult, particularly in the philological-historical studies. Here no course of inter-related studies is offered; a beginning can be made almost anywhere, for, granting the elementary work done in the preparatory schools, we have here a field of study without beginning or end; instead of subordination coördination is the aim. And the difficulty is increased by the necessity, imposed by the head-master's examination, of pursuing, at the same time, studies in a variety of departments with different fixed requirements. It is no wonder that thoughtless and aimless study occurs here oftener than elsewhere, and with the same result: needless extension of the time of study or even complete failure. Usually, following inclination and interest, the student begins with a careless browsing at large; various

subjects are attempted only to be given up; finally, external circumstances bring him to the end of his course, and he is compelled to drop much that he has begun in order quickly to master the most necessary things for the examination. Or he really cannot rake up the courage to bring things to a head; everything, even an examination, has its day; and when the time for preparation has once been wasted, courage to face the ordeal cannot, as a rule, be revived. It is all the more important, then, that in this department especially, seasonable consideration of possibilities and necessities should be had, that one should clearly understand: *quid ferre recusent, quid valeant humeri*.

Formerly, at many places, an invitation to such consideration and assistance in it were offered the student, by supplying him with a plan of study at his matriculation. So far as I am aware this practice has been gradually abandoned; only the schedule of lectures is now placed in the student's hands, and it is left to him to arrange his course for each semester as he pleases. That his choice is not infrequently amazing is well known to all who are familiar with students' registration-books (*Anmeldebücher*). It does seem that something more might be done to guide the student in the right direction. When one considers the anxious precision with which the curricula are fixed for the gymnasia by conferences and governmental decrees, the haggling and bargaining over each hour, the indifference with which the arrangement of his university course is left to the most inexperienced student stands out in strange contrast.

It is true, the problem is a difficult one. And debating it in a many-headed faculty will scarcely solve it. Perhaps of most value would be purely private schemes of study which individual teachers might arrange for their special departments, for the different branches of philology, historical research, natural science, etc. With the freedom that goes with lack of responsibility, they might express their opinions, much as they would privately, to a young disciple of science applying for advice, concerning general presuppositions, necessary aims, indispensable means, possible ways of beginning, relation to kindred sciences, etc. And the more these schemes would assume the form of thoughtful, critical reports of the teacher's own ex-

perience as a student the greater would be their value: *praecepta docent, exempla trahunt*. In this connection brief accounts of the development of science in the immediate past would also be useful, such, for example, as are found in the great compilation on the German universities for the Columbian Exposition at Chicago. Many of these treatises, for example, Loofs' article on ecclesiastical history, Eck's on Roman law, Wilamowitz's on classical philology, Waldeyer's on anatomy, Virchow's on pathological anatomy, would do the student good service by acquainting him with the prevailing tendencies, the most distinguished achievements, and the essential changes of the past century.

It would then remain, for each student, with the help of such advice, to select that which best suited his particular circumstances. The student's privilege of individualizing his course must not be abridged. But this does not mean that it would not be proper, also, to listen to the advice of those who have recently passed this way. In many respects an older fellow-student is probably the best adviser a young student can find, for he knows his troubles and needs from his own recent experience, and is familiar with the concrete conditions in the university, the several teachers, their lectures and exercises, what they demand, and what they offer. It would also be well to remember the old school-teachers in this connection: their advice would have the advantage of their familiarity, through long intercourse, with the personal circumstances, the interests and capacities of their former students. If they have themselves remained in touch with science and the university, they will be especially competent to guide the student's first steps upon his new career.

In like manner it would be well to arrange a plan of work at the beginning of each semester, as well as for the entire course: to choose a subject as the major study, certain lectures and exercises, certain text-books, certain ends to be aimed at in reading: a certain author or a group of authors, etc. Of course, such a plan, like the one for the entire course, must always be flexible; that which it is possible and necessary to do becomes plainer as the work goes on. But the choice of work should not be left to accident or the inspiration of the moment. Even a plan for the division of the day might prove to be profitable in that it

would hold one to a full use of his time. The idea is to fix a task for oneself, as was formerly done for one by the school and is later done by the office which one fills, the fixed task being at once a protection against doing too much or too little. And an entry in a diary about the work that has been accomplished, just a brief description of it, will also be of service. It is well known how much Goethe insisted upon this, both for himself and others.

It will be important to reserve some time for studies of a general character in addition to one's professional study: in addition to one's major study such and such a side study for such a semester; also, every day or week, certain hours for general reading, poetry, history, biography, or anything else. The ability to enjoy such things must be kept alive by not allowing oneself to become entirely absorbed in a single subject. The soul is dried up by a too one-sided occupation with a scientific subject so that susceptibility to other interests dies out.

Naturally, what applies to the semester is applicable also to the vacations which, obviously, are not intended merely for recuperation or even for sweet idleness. One ought to provide for definite work: to read an author for such and such a purpose and with certain helps, to carry on certain investigations, etc. It is especially appropriate during vacation to do quite a number of things in the way of general culture, for example, to study a philosopher, Kant or Schopenhauer, whose works can readily be carried along in a satchel. At another time the vacation period can be given over to one of our great poets, Goethe, for example, a world in himself, but also in touch with all things, with all the sciences. Here again, the profit and pleasure of reading is increased when one has a definite task, reads for a definite purpose and to settle definite questions, and, possibly makes a collection of books with this in view. Occasionally, also, one may find an appreciative audience for a modest address, say among one's former fellow-students, or wherever it may happen to be.

But enough of method of study and division of time. The most difficult problem of method is, probably, to strike a happy medium between the general demands of a professional education and one's personal interest in science. Differences can

arise here which may lead to sharp conflict between personal inclination and external necessity. In our day this occurs most frequently, no doubt, when one develops a special predilection for some particular field; this is cultivated by a bit of special research work; the very atmosphere at the universities lends encouragement; the instructor is himself a successful investigator in some limited domain and attracts his pupils to assist in his work. It thus happens that in his satisfaction with some scientific investigation, perhaps the work done on a thesis, the student forgets the requirements of his professional education until the state examination rudely reminds him that he is destined to be a teacher or a doctor, and not a specialist in some obscure bit of philology or bacteriology. The examinations throughout are planned to protect the interests of professional education against the one-sided demands of specialization, which the work of universities, as scientific institutions, encourages. The individual student, however, must find the happy medium between these two tendencies: to lend himself to investigation in such wise that his general education in the entire field of his profession shall not suffer thereby, and, on the other hand, so to pursue his general studies that he will not lose himself in a kind of encyclopedic shallowness, but will, at some point or other, approximate scientific work. *In uno habitandum, in multis versandum.*

The philosophical mind represents a tendency opposite to that of specialization. It is interested in the universal element in the sciences, in that phase of them which points to philosophy, it is indifferent to particulars as such, and inclined to underestimate the value of positive knowledge. Closely related to it is the artistic temperament; averse to the fragmentariness of research, it aims, with creative fancy, at the formation of a whole. Here also, now, the requirements of the examination, the gate of entrance to the professions, rudely interfere with personal inclination, by insisting upon positive knowledge, historical information, figures and dates, things which had heretofore been looked upon with contempt as belonging to the "bread and butter sciences." Much of the dissatisfaction with university science and university work which has recently made itself heard has its origin in just such antagonisms be-

tween the general official requirements and personal educational ideals.

A quotation from Goethe may comfort those who suffer from such conflicts: "A man who experiences restraint at an early age achieves an easy freedom; the man upon whom restraint is forced at a later age, gains nothing but bitter freedom." No matter how much the pressure of reality and the life process may be felt at any given moment, man cannot get away from it; to live and do means to influence one's environment and to be influenced by it. It is, consequently, important to learn early how to adapt oneself to the world and its requirements, and, at the same time, to assert oneself. For the student this means to do full justice to the examinations and yet remain true to his own scientific inclinations, to his own educational ideals.

CHAPTER IV

THE EXAMINATIONS

1. *The Nature, Kinds, and Forms of the Examinations.* I preface my treatment of the university examinations with a few general remarks.

By an examination is meant the systematic endeavor, by an expert, to determine the extent of a student's knowledge and general fitness. There are two kinds, the school and the state, or official, examinations. The former concern the school alone; they grow out of the purposes of instruction and assist it, they reveal the student's standing and supply the teacher with the means for judging his progress and the possibility of his promotion to a higher grade. At the same time they are an incentive to the student, in preparing for them, to make sure of his facts, and give him an opportunity to master his knowledge.

The state, or official, examinations, have another purpose, entirely foreign to instruction. They serve as a method of selection of candidates for offices or certain professions. Therefore they are not conducted by the teachers (at least not in their capacity as such), but by specially appointed examiners, according to an officially fixed rule (*Prüfungsordnung*). The object is, to determine whether a person has the necessary knowledge and dexterity for a profession or an office; recognition as a candidate for certain positions is dependent upon passing, and since the grades given correspond to the quality of the work done the examinations serve also to classify the candidates.

The academic examinations occupy a middle ground between these two. They are not school examinations, for with them instruction comes to an end; but neither are they, at least with us, properly speaking, official examinations, for they do not secure any governmental privileges except the right to the title which

they confer. And the same is true of the *Reifeprüfung*. It is held at the close of the school course by the teachers, but under the inspection of a state official; it does not qualify the student for an office, but certifies to his maturity and fitness to take the university course with an academic profession in view. It is a kind of general preparation for the subsequent state examination.

All examinations generally consist of questions to be answered and problems to be solved. They are either written or oral. Each method has its advantages and disadvantages. Written examinations give opportunity for more careful reflection. This is especially true of more important research work selected by the candidate himself, and which best enables him to show what he can do in science. It is true that this method, when the work is not done under the direct supervision of the instructor, as is often the case, does not offer any assurance that the work was performed independently, supplies no guarantee against unlawful assistance and literary theft; no examiner is proof against deception. In this respect the security is greater, though not complete, in work done in the confinement of the examination room, as in the final examinations. It is true, again, that this method also has its drawbacks, for when it happens, as in the case of the *Reifeprüfung*, that the examination does not take place immediately at the close of the examinee's course of instruction, or does not take into account individual differences, its inflexible form allows much room for chance. It must be added that this method usually has the tendency to promote the learning by rote of answers to possible questions by way of preparation; the "*Presse*"¹ is the school that corresponds to such an examination.

On the other hand the oral examination, especially when conducted as a conversation between two persons, has the greatest freedom; it gives the examiner the opportunity to follow the candidate into the lines in which he is strongest and, by searching questioning, to distinguish between specious and genuine knowledge. The old maxim: Speak so I can see you! is still significant. And yet there are certain dangers in this complete

¹A school which prepares students for the examination in a short time by a kind of forcing process.

freedom; no other method affords prejudice, either previously conceived or arising at the moment, so much opportunity for unjust treatment and judgment; furthermore, accidental advantages or disadvantages of the outer or inner attitude of the examinee cannot be brought out more unfairly anywhere than just here.

Hence the combination of the two methods will probably be the best. Acting somewhat like a compensation pendulum it offers the greatest possible security against deception, accident, and injustice.

2. *The Academic Examinations and their Significance.* Originally the degrees meant ability to teach at the universities, admission into the faculty; even the first degree, that of *baccalaureus*, bestowed a qualified permission to teach, while that of *magister* or *doctor* meant an unqualified right so to do. As a matter of fact they also served, in a certain sense, the purpose of a state examination, in so far as they were recommendations for positions in both church and state, even, to a wide extent, as late as the eighteenth century. Since the introduction of the state examinations they have lost this significance, although there remains a survival of their original meaning in that the doctorate is still the first requisite for an academic teacher, although further work is everywhere required for actual entrance into the profession.

This brings us to the actual significance of the academic examinations. They are merely intended to test the student's ability to do scientific work, not to determine his fitness for a profession. The principal part of the examination is, therefore, a scientific treatise, the dissertation; the oral examination is secondary, being intended rather to guard against deception and as something supplementary in the way of general scientific culture. The dissertation is printed as an initial specimen of scientific work, that is to say, is submitted to the judgment of the scientific world, while other examination tasks have fulfilled their purpose when they assist the examiner to pass judgment upon the candidate. This means that dissertations ought to be the natural result of independent work. For other examination exercises the problems are given to the student, but he must himself select the subject for his dissertation. This does not

mean that the subject selected cannot be discussed with the instructor, nor that he does not call the student's attention to possible themes. It would, however, be entirely contrary to the spirit of the system to assign a ready-made theme to some one with an itching to secure an academic title. Dissertation factories are an unwholesome symptom of university life.

The significance of the academic examinations differs in the different faculties. They have retained most of their ancient significance in the theological faculty, and least in the medical. In the former the title of licentiate is still a literary honor, and the doctorate is regularly bestowed, *honoris causa*, upon actual scholars, except when it is also given as a mark of honor to men who have otherwise achieved renown. The medical doctorate is little more than a professional title demanded by tradition, the examinations have no real significance in comparison with the state examinations, and the dissertations, as a rule, cannot claim to be genuine scientific works. The question might be raised whether it would not be proper without more ado to make the doctor's title depend upon the successful passing of the state examinations, especially since the degree cannot be conferred until after the state examination, and since the examination is conducted in either case by the faculty. This would, however, be contrary to the economic interests of the faculties. In the two other faculties the doctorate occupies a middle position; the incentive to secure it is here also mostly due to the desire for a title which means more from a social standpoint than barrister or upper-master or licensed chemist. But on the whole, superior scientific treatises are required, though, of course, in varying degree. Many dissertations are really first class scientific works of permanent value, and find a place at once in scientific journals and compilations.

3. *The Professional and State Examinations and their Significance.* These examinations date back to the ecclesiastical examinations for the clergy. It was here that a genuine scholastic or scientific education was first recognized as a necessary prerequisite for the profession. The examination, like the regulation of the education preceding it and the subsequent consecrations, was originally controlled by the bishops. The inquiry into

the candidate's scientific ability—a feature of the examination which affected all the qualifications for the office—was regularly directed to three essential points: his knowledge of church language, church doctrine, and church laws. Toward the close of the Middle Ages the possession of an academic degree, either in theology or canon law, was customarily or legally demanded for the higher ranks, such as bishops and prelates and a portion, at least, of the cathedral chapters. These conditions are still in vogue, except that, in harmony with the universal progress of scientific culture, the education of the lower clergy has also improved. At present throughout Germany the law demands the completion of a *triennium academicum*, either at a university or an ecclesiastical seminary; and occasionally also the presence of the state's representative at the examinations is provided for in order to prevent instruction inimical to the state. The Protestant established churches have, on the whole, accepted this regulation, the superintendents and consistories taking the place of the bishops as the organs of the ecclesiastical power. It is the duty of the latter to superintend not only the doctrine and life of the clergy, but also to examine into the personal, moral, and scientific fitness of the candidates for clerical offices. However, university professors of theology regularly assist in the scientific examinations, the faculties either acting directly as examining boards, or individual professors serving as members of such boards.

As a rule, the examination is divided into two parts: The first, or so-called *examen pro licentia concionandi*, occurs immediately at the end of the university course; the second, or *examen pro ministerio*, follows after an interval of at least one year.¹

After a long interval the secular professions followed the example of the clerical calling in this matter of special official examinations. The new system barely goes beyond the beginning of the eighteenth century; until then the academic examinations and degrees, or even merely the testimonials of an academic teacher or of the faculties, took their place. In Prussia, during the first decades of the eighteenth century,

¹ Historical matter and particular laws in the works of Hinschius and Richter on Ecclesiastical Law.

particularly during the reign of Frederick William I, the great organizer of our national life, a special state examination for jurists and physicians began to develop in addition to the academic examination, which continued in vogue.

The first legislation covering a state examination for jurists in Prussia dates back as far as 1693. It provides that, "following the example of the Imperial Chamber of Justice and other high *collegiorum* of justice in the Roman Empire," in filling a vacancy in the court the aspirant must submit a trial report (*Proberelation*) to the Supreme Court and be examined by the court.¹ Under the two succeeding kings more precise regulations were enacted covering the examination and the closely related probationary service in the administration of justice, regulations which were closely connected with intended reforms of the entire judicial system of the country. University testimonials indicating the completion of a course in law, are regularly presupposed by these regulations; the state examination by the commission was merely a protection against the possible inadequacy of the academic examinations. During the nineteenth century the state examination, divided into two parts, the first at the close of the university course, the second at the conclusion of the practical preparatory work, superseded the academic examination entirely; the academic degrees no longer have any significance as indications of ability for legal position. For a time there was a tendency to exclude the professors entirely from the state examinations and to turn them over to practical lawyers; the effect of this policy upon the scientific education of the candidates can be gleaned from Goldschmidt. Legal instruction in Prussia seemed for a time inclined to retire from the universities into the *repetitoria*, coaching schools for examinations, and the practical preparatory work. According to present regulations one-half of the members of the examining board is composed of professors; the regulations embracing the obligatory work at the universities also indicate a tendency to make the scientific instruction more effective.

¹ Goldschmidt, *Rechtsstudium und Prüfungsordnung*, p. 157. The entire section on the historical development of the system of studies and examinations, as well as of the period of practical preparatory service, deserves to be read.

The medical state examination shows a similar development. The first provision for it in Prussia dates back to 1725; a physician, having graduated at the university, was required, before he could begin practice, to present himself before the *collegium medicum* and the *collegium medico-chirurgicum* at Berlin, with his academic testimonials, and demonstrate a *casus*, when permission to practise was granted.¹ At the close of the century a complete state examination before a medical board was demanded. Here, also, after the university's connection with the examination had thus been severed, the tendency developed for a time to substitute actual practitioners for professors as examiners; of course this was soon found to be impossible; practising physicians seldom combined ability and inclination for this function. According to the regulations now in force (dating from 1901) the examining boards are mostly composed of professors of the medical faculties. But this also gives rise to considerable difficulties; the free choice of a professor by the student is nowhere so restricted as in the medical faculty, where the laboratories and examinations create complete monopolies. The examination which, in Prussia, is preceded by the *tentamen physicum* after the first four semesters, is directed toward the scientific and practical education of the physician. The examination for the doctorate, as has been said, has now only ornamental value.

The special state examination for the fourth faculty was the last one to be developed. As late as the beginning of the nineteenth century it was the practice to have an examination *pr loco* by the consistory, which also conducted the theological examinations, whenever the candidate's *testimonia* from his university instructors or his degree did not seem to be a sufficient guarantee of his ability to teach. Not until 1810 did Prussia lead the way with a regulation for a special state examination bearing upon general scientific qualifications, and to be taken by all teachers who intended to be candidates for positions in the gymnasia. This examination is now held by a commission appointed annually by the minister

¹ Billroth, in his *Lehren und Lernen der medizinischen Wissenschaft*, gives an account of the history of medical studies and examinations, in many respects instructive.

of education and composed of professors and practical school men. The presiding officer is always a *Provinzialschulrat* (provincial school director).

From all this it appears that the state examinations have developed spontaneously with the modern state and the civil service. They were wanting in the old patriarchal feudal state, in which, for a few positions, the academic degrees served as evidence of preparation, but for the remainder family connections, influence, and recommendations were far more important. The modern state, based upon the principle of the legal equality of all, has done away with this system and has substituted that of state examinations. One can now become an applicant for office only by passing the examinations, and there can be no assumption of office without evidence that the prescribed course of study has been successfully accomplished. Another principle also comes into application here, that of promotion according to priority, provided, always, that the service rendered warrants it.

The significance of this system, the function of the examinations, is twofold. On the one hand, they give the state and society some assurance that no one with an insufficient education can secure an office or enter a profession. On the other, they furnish those who have successfully passed the examination with some assurance that a suitable position can be obtained, at least with the assurance that not any one who happens along shall be preferred upon purely personal grounds.

I say some assurance, for it will not be complete. Passing the examination is, of course, by no means reliable evidence of ability to enter the professions; this probably depends, to a much higher degree, upon many other things than upon the knowledge displayed in the examinations. But the examination does not even infallibly reveal whether the candidate has sufficient scientific education; many a one has slipped through, and many a one will continue to slip through on a few hastily learned answers to accidental questions. Much less can the examinations be relied upon as a means of classification. Everybody knows how much room there is for chance and luck even in a serious and well conducted examination. Nor is the influence of what may be termed the personal factor, less important. There are those who know how to make much out of little, and understand the art of

"putting the best foot forward," who make more of a display in an examination than their knowledge warrants. On the other hand are those thoroughly prepared and competent candidates who never appear in a worse light than in an examination—embarrassed, easily intimidated and confused persons who lose control of themselves at the critical moment, whose memory fails them, and whose judgment seems to be paralyzed. The personal factor in the examiners also looms large: ability to quiz, to listen, to understand, to appreciate, differs widely for different persons, and is not always the same in the same individual. Even the most expert and just examiner cannot guarantee a perfectly just judgment. He can guarantee that an entirely ignorant person shall not pass and that a competent and well instructed one shall not fail; but between these two extremes lies a broad field for uncertainty and mistakes. It may happen that a candidate who has done very earnest scientific work, receives a grade below his real desert, either because he did not prepare for the examination or because it happened not to touch his strong points; or the reverse may happen, and a candidate who, without doing any real scientific work, has prepared himself for the examination and a particular examiner, and knows how to tell what he knows, may be graded much too high.

All this implies, also, that the examinations by no means supply the candidates with the complete assurance that competency and merit will be decisive in the competition for office. As little as the patronage system necessarily favors the incompetent, does the system of examinations necessarily favor the most competent. Nothing in human affairs is absolute. But we cannot and do not, on that account, desire to give up the examinations; they are imperfect, but we have nothing better, and the most competent have the best reasons for wishing to have the examinations continued and earnestly conducted.

4. *Incidental Effects of the Examinations.* Like every public system, this one also has its undesigned, incidental effects. As the first of these, though partly intentional, may be regarded the fact that the examinations and their regulations, like guideposts, point the student to the goal and act as an incentive to its attainment when other more subjective motives are not sufficient. In addition to such not undesirable incidental effects, which

are even occasionally looked upon as the chief objects of the examinations, other less desirable ones, and contrary to the end aimed at, must be considered.

(1) The student's attitude to his work is disturbed. The prospective examination necessarily turns his attention from the subject itself to the examination that must be passed. This leads to appreciable disturbances of scientific study; he loses his sense of ease, and his theoretic interest in the subject is repressed by considerations of what would be useful and necessary in the examination, what could be dispensed with or might even prove to be a hindrance. Thus a man's studies become somewhat banal; something like vulgar speculation in the well-known weaknesses and hobbies of the examiner may even have a part in them. And if this is injurious, making the whole business seem contemptible to the student himself, still further injury is done by the fact that the examinations compel him to busy himself with things which are of no real value to him and thus prevent him from following his inclinations for other things. I have no doubt that the cramming of *syllabi* for the examinations, especially in so-called "general culture," not infrequently has the effect of establishing feelings of hatred and contempt for the subjects of the examinations. Both the major and the minor prophets of Israel, and I fear many philosophers also, from the pre-Socratics down to Spinoza and Kant, can descant upon this point.

(2) The examinations have a tendency to fix the student's attention upon that which can readily be learned. An examination arranged for an extraneous purpose and conducted by strange examiners necessarily appeals to the memory and to a comprehensive knowledge of the subject in question. It cannot concern itself very much with the candidate's judgment or his intellectual capacity, because these could only be revealed by connected work upon some single point. An examination does not easily furnish much opportunity for discovering what a candidate really is and can do, what he feels and thinks. "I believe," says a shrewd English observer, "that a person may be a well-read man and have derived great advantage from his reading, and yet not be able to produce any particular knowledge; and on the other hand, a man may learn many things

about books, and may commit many scraps to memory, and get marks in examinations, and yet obtain no good from this knowledge worth mention.”¹

Thus it happens that the examination lends an importance to the less important things, to the immediate and presentable possessions of memory, far beyond their real value. The further consequence is that the student's studies are directed toward the effort to impress dates and numbers, formulas and definitions, titles of books and questions, upon the mind. And still another result is that really productive thinkers, who are interested in the subject for its own sake, and who have ability and inclination to find their own way, are at a disadvantage, while the passive ones, who are adapted for mechanical learning, have an advantage. All these are incidental effects which lie in the very nature of the examinations, and are independent both of their purpose and the method in which they are carried on; they tend to favor the average and mediocre at the expense of superior individualities, as well as to foster a lack of independent judgment and exaggerate the value of mere mechanical knowledge; all of which is not, of course, said either to comfort or increase the pride of those ignorant ones who fail, *rite et merito*.

One of the leaders of a science in which Germany at present unquestionably has the leadership, the chemist Ostwald, of Leipzig, recently brought out these points in an excellent address on *Scientific and Technical Education*.² Among practical chemists the demand had become insistent for a state examination in chemistry, with a diploma and title (say government chemist). Ostwald strenuously opposes this on the ground that

¹ H. Latham, *On the Action of Examinations Considered as a Means of Selection*, Cambridge, 1877. A quotation from P. de Lagarde may be added here: “Only he is entitled to pass judgment upon a man who has observed him in actual life—that is to say, at work. It is a matter of the utmost indifference what a candidate repeats after his instructors or from a book about epoch-making ideas or the significance of Herder or Lessing—six months after he will no longer remember the phrases. If he is to amount to anything he must have become in some respects like Herder and Lessing, and that no one can discover by means of an examination (*Deutsche Schriften*, p. 157). ”

² *Zeitschrift für Elektrochemie*, 1897-98, No. 1.

the secret of success in this department in Germany is the free, purely theoretic, academic and individual character of the instruction and examinations. France, which had such a great advantage, lost it because it "provided training at the expense of development." The ultra-conservatism of science in that country, he goes on to say, is intimately connected with the rigidity of the educational system: only after a long series of examinations can one become a teacher. "After one has spent the best and most vigorous years of one's life in assimilating the thoughts of others, it requires unusual energy to give oneself up successfully to original thought in relatively late years. And it is apparent that a teacher trained in this way will unconsciously so shape his instruction that his pupils may successfully pass the examinations, and will not annoy them with matters that lie outside of them, especially not with those whose importance is not generally recognized in science." In contrast to this, everything in Germany leads to freedom and independence in study; the German doctor of philosophy, whose entire examination really consists in the performance of an independent piece of work, has learned "how to master unsolved problems, how to pass from the known to the unknown." And that explains the power with which he afterward solves technical problems, and which enables him to win success in the open competition of the world.

In addition to these two incidental effects of the examinations others could be mentioned, but I shall not enlarge upon them, although they are by no means inconsiderable. For instance, the overwork and excitement frequently caused by preparation for the examination itself; there can be no doubt that many a one goes into the upper-master's examination for example, worn out and half sick, and suffers from the effects of the overwork and excitement for a long time after, even though everything runs off smoothly. Then there is, too, the mortification due to an undeserved, or the depression which follows a deserved failure, or, on the other hand, there is the proud self-assurance and vainglory which a good grade is apt to leave in the person who gets it, for the rest of his life perhaps. Bismarck must have had opportunity for observing both these things in his surroundings. J. Booth (in *Erinnerungen an den*

Fürsten Bismarck) preserves a bit of his table talk: "The examinations will be our ruin; most of those who pass them are so exhausted that they are incapable of any initiative, assume a negative attitude toward everything that concerns them, and, worst of all, have a high opinion of their own capacities because they passed these examinations successfully." These remarks were called forth by the *Geheimräte*, for whom Bismarck, as is well known, had no affection. He forgot himself so far on this occasion as to add the almost blasphemous assertion: "Among us there can be no improvement until all the *Geheimräte* are exterminated root and branch."

Bismarck pinned his faith on persons, not on regulations, while that *abstractum* the *Geheimrat* believes in regulations, but not in persons. Hence the latter's preference for examinations, which, in the last analysis, all have their origin in lack of faith in persons—the state examinations in lack of faith in the academic instructors and their testimony, and the university entrance examinations in lack of faith in the gymnasial teachers.

To be sure, under present circumstances, we cannot abolish the examinations; they are indispensable and, on the whole, accomplish much good by preventing evil. But we must be on our guard against multiplying them beyond the point of necessity; an unnecessary examination is an evil. Similarly, we ought to guard against putting too much confidence in examination grades. We ought to consider the individuals and what they can do, not their grades and what they may have known in an examination. To make a man's entire subsequent career depend upon the results of a single hour and the accidents incidental to it, is not wise.

Will this new century break away from the excessive faith in and superstitious regard for the examinations which characterized the nineteenth century? The unprecedented has already happened in the actual abolishment of an examination, the dreadful final examination (*Abschlussprüfung*), which, by the law of 1892, had been inserted as an intermediate state examination in the gymnasium course between the lower and upper second forms (*Unter- und Obersekunda*). May we hope for further improvement in this direction? Or will the new century

gratify us, instead, with additional examinations? I confess that I am inclined to fear rather than to hope, in these matters.

All examinations creep in under the plea of harmlessness. It is, so the story goes, merely a question of simple demonstration of what one has accomplished in the preceding course, and this does not call for any special hasty work and memorizing. All the regulations for the entrance examinations begin in this way. And then reference is made to the fair judgment, consideration and weighing of personal circumstances, which will prevent all harmful incidental effects. It may be that this is all true, to a certain extent, when a long personal acquaintance precedes the examination as in the case of the entrance examinations (*Abiturientenprüfung*), although even then the dominant characteristics of the examination make themselves felt. Any man, who, in a state examination, bases his hopes upon fairness and a consideration of his individuality, upon the weighing of personal circumstances, of such as exist before, in, and after the examination, deliberately deceives himself. If the examination were in the hands of one man, of a man with time and ability, sagacity and patience enough to inquire into the personality and previous history of each candidate, such a hope might be justified. But such is not the case. The examinations are conducted by a commission; each examiner quizzes in a certain department, each one has to examine from two to six candidates in each period, each is in a hurry to get rid of what is by no means a pleasant task, and it often happens that each one sees the candidate for the first and last time in his life, so that a personal interest in him is well-nigh impossible; the examiners themselves are frequently strangers to one another, and the discussion of the subject, in the hurry with which the business is conducted, is reduced to a minimum: how, under such circumstances, can there be fairness and a consideration of particular conditions? An examination commission is a machine, but a machine is heartless and knows nothing about fairness; it works with strict uniformity and business-like routine; it gives no sign even when it seizes and crushes some living thing.

5. *The Examiners.* In the first place, who shall conduct the

examinations? The university instructor or the man of practice?

The natural answer would seem to be, the instructors. They are both scientific men and teachers. They know what the candidate has learned during the course, and on the other hand, the candidates know what the teacher looks upon as important: there is no doubt that such acquaintance makes a mutual understanding as to the examination much easier. There is also a certain amount of personal acquaintance, and the instructor has had opportunity, in the exercises and laboratories, to become familiar with the temper and the scientific development of the candidate; the result of the examination will, consequently, depend less upon the results of chance.

But there is also a reverse side to this matter, yes, more than one. In the first place, the prospect of the examination introduces a disturbing element into the attitude of the student toward the instructor. What is naturally the freest of all relations can easily be tinctured with dependence and shrewd calculation. The student who is examined by a professor will feel himself limited in his choice of instructors, possibly even restricted in his liberty of judgment. It may be groundless, but I am convinced that dread of the examinations in many cases needlessly increases the student's dependence; however, it may also happen that the prospect of the examination imposes caution in the choice of an instructor and in one's views. While, therefore, the position of examiner carries with it a kind of right of proscription, it also, in so far as it is a government office, brings about an increased dependence of the university teacher upon the administration; judgment upon his conduct can be rendered by appointment to or dismissal from this office.

Furthermore; there is, in the very nature of the case, a contradiction between the purposes of academic instruction and the requirements of the state examination; the former tends to specialization, the latter, taking into consideration the requirements of the professions, must have a more general character. When, therefore, the examination is entrusted to an academic teacher it may easily happen, either that the professor gives the examination a specialistic character, or, on the other hand, that the general character of the examination tends to lower the uni-

versity instruction to an encyclopedic and scholastic level. The former has not infrequently happened in Germany, the latter is noticeable in France. The formal separation of the state examination from the faculties has given university instruction in Germany, especially in the philosophical faculty, the liberty to develop entirely in the direction of research work. But because, as a matter of fact, professors always take part in the head-masters' examinations, the inclination of the examiners to excessive, specialized requirements, which threatened to go to an unlimited extent on account of the continual sub-division of the departments, had to be curbed again and again by the regulations, even down to the latest in 1898. The opposite results came about in France, where, up to the present day, the faculties act as the state's examination commission. The result is that the passing of the examination is made the chief aim of academic instruction, and that, therefore, the instruction is directed more toward this end than to scientific progress.

If, on the other hand, the examinations are committed entirely to men who are practically engaged in the professions, they will all too easily get out of touch with the actual task of science, will become mere inquiries into what is generally accepted, into what is current, perhaps what was current yesterday. And that would be most painfully felt by those who, during their course, devoted themselves most unreservedly to science, without any concern for the demands which the examinations would make upon them. This would not be felt equally in all the departments; least of all where a canonical content of knowledge is most in evidence, but most in those departments in which a rapid increase of knowledge, or at least a rapid change in its conception, takes place. A man whose time is given to the practice of his profession will not, as a rule, be able to keep up with the scientific work in his line, at least not to the full extent of his science. He will, consequently, probably be an inwardly uncertain, but outwardly severe examiner who, with austere official demeanor, will exact the *debitum* exactly as he has arranged it, perhaps even in the form of a written list of questions. The more an examiner knows about a science, the more desirable he will be to those candidates who have worked earnestly in some particular

specialty, while those who have "crammed" for his questions with the aid of text-books or even examination papers, will most likely prefer the other one.

The practical conclusions from these considerations will be, that here also the mixed system most commends itself: men of practice and men of science should both have a place upon the commission. It would be the business of the former to emphasize the requirements of professional education and practice, of the latter, to emphasize the necessity for scientific culture, or, better still, to give the candidates opportunity to show, each in his own way, what they can do either in the one direction or the other.¹

One further word concerning the method to be pursued. This must be determined by the purpose, which is to ascertain, as clearly and completely as possible, the actual condition of the candidate's knowledge and ability. The main thing will therefore be to learn what he can do and what he knows, and, secondarily, what he cannot do and what he does not know. Or, the examination will be, in the main, so conducted that the candidate will have the opportunity to reveal his strong points, as well as his limitations and deficiencies. It would be compatible with this purpose to allow the candidate first to tell what studies he has pursued and then to follow the hints thus obtained. Such a course would also give the first opportunity for an insight into his real attitude toward science, into the character of his work and his conception of it. The candidate would thereby also be assisted in overcoming the difficulties of beginning, and would obtain confidence in his examiner and courage for his task. Then the examination might proceed to adjoining and, gradually, to more remote topics in order to ascertain, also, the extent and limits of the candidate's knowledge.

Contrariwise, it would be a very faulty method for the examiner, without first getting into touch with the candidate, to

¹ The mixed system is recommended also by Goldschmidt, *Rechtsstudium*, pp. 309 ff. The fatal results of the exclusive employment of practitioners as examiners are here revealed with great acuteness, indeed the opposition of the practitioners to the theorists, or the university professors, an opposition which, in the domain of jurisprudence, once almost became enmity, runs through the entire book.

ask at random all kinds of questions in every possible direction; or, deliberately to try to disclose and make him conscious of the deficiencies of his knowledge; or, happening upon ignorance at any particular point, to feel called upon by persistent quizzing, to reveal its full extent. It would be just as bad for him to let himself be put off with superficial and evasive answers, or, exchanging the role of the examiner for that of the teacher, to attempt to supply the deficiencies which he discovers, or to correct false conceptions, or even to permit his own learning to scintillate. An examination has not the same purpose as a lecture, and there are candidates who know how to make the most of such weakness.

So far as the form of the questions is concerned they will be definite and intelligible, not general, ambiguous, and puzzling. Puzzling questions, intentional or otherwise, in the form, for example, which requires the candidate to supply a definite catchword for some descriptive paraphrase, are confusing and annoying. One should begin with known facts, concrete phenomena, definite conceptions, in order to fix the attention at once upon some particular thing; a couple of questions properly answered at the beginning increase the candidate's confidence, while the missing of a few questions will make him lose confidence and easily awaken ill humor and impatience on the part of the examiner.

That the outward bearing of the examiner should be friendly and courteous, that he should not, with gruff voice, intimidate, with surly demeanor, repel, or even, with sneering remarks, insult the candidate ought to be self-evident; the very defencelessness of the examinee should protect him. It is true, it does not always do so, for there are examiners who cannot deny themselves the pleasure of frightening the candidate, making him ashamed, airing their own wit at his expense. The despot in human nature reveals himself in various ways.

6. *Preparation for the Examination.* There are idealists who advise the students to devote themselves to the study of science without ever bothering about the examination at all. Every now and then, in academic speeches, those are referred to with indignation whose first care it is, upon entering the course, to secure a copy of the examination regulations in order

to ascertain at once exactly what and how much must be learned in order to pass.

It is not, of course, my intention to praise such conduct as this, or to oppose purely scientific endeavors. Certainly, in the main, the love of knowledge should be the student's guide, not the examination and its requirements. Seek science first, believing that the other things will be added to you. However, it is easily possible to have too much faith, and this sometimes happens; one occasionally meets with a beatific confidence in this respect, especially in earnest and capable young persons, which is entirely ill-advised and must, in the end, be atoned for by severest disappointment. It must never be forgotten that the pursuit of science for its own sake and preparation for the state examination are two entirely different things; it is possible to understand a subject thoroughly without being able to pass an examination upon it, and, contrariwise, it is possible to pass an examination in a subject without really understanding it.

Hence the best advice would be to do the one and not leave the other undone. The true student will love his science, and pursue it as if there were no such thing in the world as an examination, and this is right and proper; but, on the other hand, the well-advised student will not neglect to find out betimes what is required in the examination. And not merely what is demanded in the regulations, but in the actual examinations, for these also are frequently very different things. The natural way to get information about an actual examination is to question those who have actually taken it. I cannot see anything unworthy in such a method; it is the usual practice, when one has to use a road with labyrinths and pitfalls, to seek advice from an experienced traveler. But the thing would become contemptible if the result would be just enough study to assure oneself against accidents in the examination, a "cramming" in anticipation of certain possible questions. Necessity, the mother of invention, has, it is well known, provided a method for those who find no time for study during the course: the examination questions are carefully preserved, with the requisite answers, perhaps even with different answers for different examiners. It is obvious that such a proceeding does not deserve

the name of science. But neither does it seem to me to go beyond the limit of permissible precaution when some one who has worked honestly and earnestly tries to fortify himself against the possibility of failure, by inquiries about the form and requirements of an actual examination. When an obstacle is known to exist at the end of a course, it is perfectly natural to try to learn what it is and, by practice, to prepare to overcome it.

And it will be well not to put off too long this effort to secure information and make preparation. It is not advisable to try to crowd too much into the last months just prior to the examination. If, under the influence of possible examination-fright, one's work is overdone, it may easily lead to a disturbance of one's mental equilibrium as well as of one's bodily health. An overburdening with hasty study and reviewing for the examinations has often destroyed one's courage and pleasure and laid the foundation for a permanent disturbance of the entire system. Especially should a hurried review of all sorts of things at the last moment be avoided; the days just before the examination by rights should be given to rest and recuperation, for no one should ever enter upon an examination harassed and exhausted.

CHAPTER V,

THE STUDENT AND POLITICS

1. *The Problem.* There was a time when the student, even in Germany, played a political role; in the period, namely, which followed the French wars and came to an end with the convulsions of 1848. Nor need the students be ashamed of this period. It is really due to the universities, their teachers and students, that the consciousness of the necessity of national political unity was kept alive and extended at a time when German patriotism was officially prosecuted as high treason. When the German princes and statesmen, either on account of weak incompetency or stubborn particularism, refused the task of creating a united state, without which the German people could not exist nor achieve glory, the professors and students threw themselves into the breach. It is true that the first attempt at the solution of the task during the great revolution of 1848 came to nothing; experience had first to teach them that the state is, primarily, force, and is brought into existence by force. But this does not impair the old truth that, above the force of arms, there is another, an invisible force, the force of ideas, and that it is in the end the strongest: without 1848 there could have been no 1866 and 1871.

Now that the great national problems have had at least a provisional solution the student is no longer conspicuous in our public life. And this is the normal condition. In other countries, in Russia, Italy, Greece, and also in Austria-Hungary, it is different. It must be said that it is a symptom of political disease when the student plays an active part in political life. It is an indication that the state and the men who guide it do not meet and satisfy the instinctive demands of the national spirit, either in domestic or foreign relations.

Practical politics will, doubtless, always be looked upon as the business of men, not of boys; it requires prudent firm-

ness and a ripe experience, and above all a soundness of judgment in human affairs, both private and public, which young people do not and cannot have because they are acquired only in life, in the professions, in responsible positions. Youth has its inspirations, passions, enthusiasms, ideals; but for the practical guidance of things it lacks everything, especially a proper appreciation of the resistance which things as they are can bring to bear against the success of an ideal. It is too apt to underestimate this resistance and come to grief.

It will, therefore, be the normal task of the student not to make but to study politics and political life. And this is, indeed, an indispensable task, for he who is destined to take a place among the governing classes in public life must consider it a sacred duty to become familiar with and pass judgment upon great public questions and national politics.

If we inquire into the means that can be used for this purpose, our attention is at once directed to the lectures, especially those in the political sciences, such as political economy, politics, jurisprudence, public law, both constitutional and administrative, as they are offered in rich variety in the philosophical and juridical faculties. As a rule public lectures upon actual questions of the day are also given. To the dogmatic lectures upon the state and society must be added the historical courses; history is still the high school of politics.

Political literature must next be considered, and here again the dogmatic and the historic treatment are complementary. And here we cannot fail to benefit from a study of our own environment from without. Thus classical antiquity offers an excellent standpoint from which to view one's own world in this way. I would therefore advise every earnest person who is determined to give this matter attention to dip into first one and then another of the great political teachers and historians of antiquity: Plato's *Republic* and Aristotle's *Politics*, Thucydides and Tacitus, not necessarily in the original, a good translation being preferable if the language stands in the way of a thorough comprehension of the thought. A direct interest will attract us to the newer treatises; historical works which describe the beginnings of our own times, or writings which introduce us to an intelligent comprehension of the problems and tasks of the

present, will be left unread by no one who wishes to be really conscious of his life; there can be no self-consciousness except in the form of historical consciousness.

The literature of the day is also a means for the training of the political judgment. I would, however, suggest that not too much be expected of it, and not too much time be given to it. Of course, the newspapers will keep us posted on the events of the day; not one newspaper, but newspapers of every kind, if only to convince us that political affairs permit and demand examination from more than one side. It will not, however, be necessary to study a half-dozen journals every day; it will be sufficient upon occasion, when important problems arise, to read a paper on each side of the question. This will also soon lead one to the discovery that newspapers are not written, as the unsophisticated reader at first supposes, for his instruction, but in order to make him a partisan of this or that view, a tool for this or that purpose. And this also will be noticed, that of all times the politics of the present are the least intelligible to us. Naturally, for only those political happenings get into the papers which seem to be useful to those who make politics. And even the men who are in political life, who make the history of the present, only see one side of what is going on; their opponents do not show their cards any more than they do. It is only when the game is over that the historians reconstruct, as best they can, the entire course of events from documents and memorials of all sorts as they gradually come to light. The newspapers, however, living only for the present, have in general no other purpose than to accompany the happenings of the day with the requisite noise to drive or frighten the reader hither and thither.

Attendance upon political meetings should also be taken into consideration. Positive instruction about affairs from this source will certainly not be expected. Nevertheless, the student in Berlin will not let the opportunity pass, of occasionally witnessing the sessions of the imperial parliament and the diet, which give him an object lesson in politics, so to speak. For the same reason an occasional mass-meeting ought also to be attended. All of which will at least result in the negative benefit that one will learn to look at things with fewer illusions. That

distance lends enchantment to the view is exemplified here also. I very well remember how different from my preconceived notions of a representative body was the impression which I received many years ago upon my first visit to the old house on the *Dönhofsplatz*. I fear that the large new structure on the *Königsplatz* does not offer any greater guarantee against disappointment.

Should political and social questions be discussed in the student societies? I would not do away with the practice altogether; the conflict of opinions encourages reflection, leads to the correction of one-sided views; and ability to comprehend and to express oneself may also be increased thereby. The principal thing, however, will be the incentive to the study of these subjects which will be thus obtained. But if, on the contrary, the effect of the society system should be to establish one all the more firmly in some party-doctrine, it would be positively opposed to the purposes of knowledge. A few more words upon this point may not be amiss.

2. *Relations to the Parties.* Parties are a necessary phenomenon of public life, necessary not merely in the sense of being unavoidable, but also indispensable: they may be described as a spontaneous organization, dictated by necessity, by means of which a mass of people really become capable of deliberating, discussing, and deciding things; the contest of parties is the method by which large numbers of people come to understand current interests and views and their relative importance. On the other hand it cannot be denied that the party system is the source of many an unpleasant phenomenon; the party spirit as such is the foe of truth and justice; it has a tendency to weaken one's sense of reality and to dull the conscience: that is true which agrees with our prejudices, and that is good which squares with our interests.

From all this it results that he who has devoted himself to the quest of truth cannot be a party man; he can cast his vote for a party, but he will not surrender his judgment to it, he will not become its slave. His choice of a party will at best be but the choice of the lesser evil.¹

¹ In an address, *Parteipolitik und Moral*, Dresden, 1900, I have enlarged somewhat upon this point of view.

From this standpoint, then, the student's relation to the party system must be defined. It will not suit him to be bound to any one party; an intellectual slavery such as parties demand is contrary to his nature, is contrary, one might say, to academic liberty, which means primarily the liberty of testing, of doubting, of seeing with one's own eyes—things which the party man as such does not permit himself or others to do. A tendency to this or that view will come of itself, but the student will make it his duty to recognize also the merits of the other side, he will guard against narrowness of view, against the blunting of his sense of truth and justice, against hatred and fanaticism, to all of which the party spirit tends. 'The man of active affairs feels himself constrained by circumstances to affiliate with a party, but the student will not surrender his rights as an onlooker to view affairs without bias and to judge them accordingly.

This must also be said: the academic professions are usually directly at the service of the entire people: for that very reason they cannot and should not, like any private citizen, place themselves unconditionally at the service of a party. The judge, the civic official, the teacher, the clergyman, as soon as they become officially active, thereby step out of party grooves, are no longer in the service of party interests but of justice, truth, the welfare of the entire people. They can, of course, belong to a party: as things now are, that may be unavoidable if they wish to take part directly in politics; but it must always be with the intention of serving the people through the party, of seeking to influence the party for the essential good of the whole. An attitude such as this will make itself felt even in the student's disposition and habits of thought.

And this will be all the more the case, the more a recently developing transformation in the nature of parties continues, the more they become changed into the representatives of the material interests of the different social groups. The older parties were mainly controlled by ideals, by antithetical conceptions of political-constitutional or ecclesiastical-religious affairs, and hence knew no professional and social distinctions. With respect to the new parties which are contesting for power in order to use it for the economic exploitation and legal oppression of the masses, with respect to the alliances based on mutual

interest, neutrality should be the politics of those who, debarred by office or profession from such associations, have the preservation of the interests of the people as their professional task. Nor will this attitude be affected by the fact that the parties claim to be the representatives of order, loyalty, religion, and the national interests, and in the name of these demand the allegiance of all "right-minded" persons. The label doesn't settle it. The members of the academic callings will not even acknowledge it to be their self-evident duty to represent the interests of the "property-holding and educated classes." They will rather, perhaps, feel that the rights and welfare of the socially weaker ones is laid upon them by their callings, because such are less able to protect their rights and welfare and must therefore depend more upon the protection of the government as the express representative of the rights and liberties of all against private aggression, remembering the king who spoke of himself as the *avocat des pauvres*, yes, even as the *roi des gueux*. And with all this they will maintain that they are thereby serving the direct interests of the state, which, as such, is not concerned with the hypertrophic development of separate social groups, but with the health and efficiency of all alike, especially of the great masses of the people, for upon them depend the national defence, the industrial capacity of the nation, and a physically and morally efficient posterity.

Shall the student, therefore, ally himself with the party which aims to achieve precisely these things, the social-democracy? It cannot be denied that such an inclination is now to be found on the part of many, not the worst, elements among the students. The idealism of youth, which looks upon the conduct of practical affairs according to general ideas as such an easy task, possibly also the semblance of bravery and the glamor of the martyr's crown, all add to the attractions of this side. But I would like to utter a warning against a too easy consent to this tendency. Not by pointing to the fact that adhesion to this party will demand struggles and sacrifices, possibly even the sacrifice of one's calling, although a decision with such serious consequences certainly calls for serious consideration, consideration, for example, of one's own power of resistance, lest some compromising behavior should have to be covered up with a

correspondingly greater measure of "loyalty" later on. But by recalling the peculiar nature of this party, which I have formerly referred to, its similarity to a sect and its consequent lack of individual liberty, and by repeating the hint that the student has no business with practical politics, least of all to set in motion a universal work of world-reform. Therefore, let this party and its doctrine also be studied—it will open one's eyes to many things; but one should not become its slave.

Furthermore, it is well to fight a little shy of these universal world improvers. I have noticed, I think, that most of those who feel called to such a task have had the least success in managing their own affairs. The belief that it is possible, by a change of laws, to set in motion a universal reformation, is apt to make a ready impression upon the young who live in the realm of thought and whom experience has not taught the difficulties of practical life. I would advise that this belief be not met with a too joyous enthusiasm, but rather with some soberness. I fear that the diseases of society are more than skin-deep and cannot, therefore, be cured by merely external applications. So long as selfishness and the greed of gain, ambition and the thirst for power, pride and the disregard of others, envy and what not, are rooted in human nature, so long will they have their effects upon every arrangement of political and social relations, and come to the surface in injustice and violence. Old Kant once said that nothing straight could be manufactured out of such a crooked stick as man. I fear that the history of the future will show that he was right, just as the history of the past has done. An absolutely just government of human affairs is an "idea which can have no corresponding object in experience." I do not say this as an argument for quietism and indifferetism; an idea is a goal for us to attain; but rather to warn against undue haste and credulity, as if things could be made perfect at one blow, with one stroke of the pen.

3. *The Social Mission of the Academic Youth.* Can and should the student, in addition to his study of social conditions, also take an active part in these things? The following facts may supply an answer. I say, an answer, not *the* answer. At the university of Copenhagen there has existed since 1882, the

Danish Student Society, with about 500 members.¹ Its purpose is, in addition to the instruction and amusement of its members—by means of lectures and debates, as well as social fêtes with song and dance—to furnish them with incentives and opportunities for social activity. Impelled by a sense of gratitude for the free access to all the treasures of knowledge, the young men determined to pass them on to others. Night-schools for workingmen have been established, in which instruction is given in writing, arithmetic, book-keeping, and in the Danish, English, German, and French languages, and finally also in the natural sciences and history. Classes of about 20 or 30 pupils, male and female, have been formed, which meet every evening during the winter. The city having made provision for instruction during the years immediately following the public-school course, the age-limit was fixed at 20. In addition to courses of instruction proper, courses of lectures, followed by discussion, are also provided, both in the cities and the country. Visits to museums and concerts for workingmen have also been included in the range of the society's work, in behalf of the aesthetic interests of the masses. Finally the society has also attempted to supply needy individuals with legal advice and to give them legal assistance; a number of attorneys, assisted by students, supply free information, upon demand, every day during two hours in the evening.

The advantage of this system, it is said, is mutual; *docendo discimus* says the old proverb: the teachers themselves learn something from it, learn to teach and guide, learn to know the people, their views and needs, learn to respect and serve them. Hence this scheme also serves to close the gap between the classes, to bring the rich and poor, the educated and uneducated together, and through coöperation, to lay the foundation for concord and respect.²

¹ *Det danske Studentersamfund og dets Virksomhed*, Nordske Forlag, 1896.

² In England also graduates and students of the universities have gone into the social betterment work: in the East End of London, in the heart of the national misery, a settlement has been founded, Toynbee Hall, from which light and love radiate into the Egyptian darkness. I call attention to an attractive little report by W. Classen, *Soziales Ritterthum in England*, Hamburg, Boysen, 1900.

In Germany, too, a beginning has been made. Students of the school of technology at Charlottenburg, in 1901, established courses of instruction for workingmen in algebra, geometry, physics and technology, and the German language and literature. If the technologists are more interested in the laboring classes, the university students are more concerned with the education of the young. That Germany has for a long time done more for the instruction of the masses than other countries should not be a hindrance and excuse, but an incentive to further spontaneous activity, for which the schools have everywhere prepared the way. And there is still room enough for it; it is precisely the years that intervene between the school and military service, the years of greatest capacity for learning, that often remain entirely unused. Something may be done by legal enactments and police regulations; but greater and more genuine results could be obtained by means of voluntary, organized private activity, which would, however, not merely be interested in the mind, but in the soul also. And to such learning and laboring in common would be added public games, especially open-air sports, as well as games and common pleasures of another sort. I refer for further particulars to the brief report by Classen mentioned before.

May it be the privilege of the twentieth century to solve the problem which destiny has bequeathed to it: to bridge the great chasm between the masses and the educated classes which, during the nineteenth century, threatened to become impassable. Not equality, but unity of purpose should be the controlling principle. And may the academic youths have a reasonable share in this work of reconciliation.

Wetekamp closes a report concerning the activities of the Danish Student Society as follows: "With exuberant and often fanatical idealism the students of the nineteenth century prepared the minds of the people for the political unity of Germany. May the modern student body recognize their opportunity and with earnest and practical endeavor seek to complete the social unity of the people to their own honor and the welfare of the Fatherland."

In this connection another field may be mentioned in which this new century of reconciliation can exercise itself, the rela-

tions, namely, of the nations among themselves. We rightly demand national sentiments of our students, because the nations are eternally fixed forms of historic life. But there is something over and above national divisions, namely the intellectual goods which form the content and value of human life. Not one of the modern nations has produced wholly by itself what it possesses of law and government, science and art, morals and religion; it enjoys them merely as one of the heirs of humanity; and whatever it adds to the heirloom it bequeathes to humanity. And it is peculiarly the duty of the academic world to keep alive the consciousness of this unity, because science is most directly and visibly an international enterprise. A narrow nationalism may be pardonable in the masses, who do not understand a foreign tongue and know nothing of the unity of the historical life of the nations; but of those who have enjoyed an academic education, whose studies daily carry them beyond the boundaries of the nation, it may reasonably be expected that they should also feel themselves to be the representatives of a universal humanity, an attitude which need by no means exclude a voluntary, robust, and profound national sentiment. If by such means that narrow nationalism which blunts the sense of truth and justice, could be somewhat repressed, it might be possible for several nationalities to live together in peace within a single state. Since, owing to the minute division of nationalities in Europe, a complete nationalization of the state can never be achieved, living together in peace ought to be recognized as a historical necessity, and the endeavor should be to make a virtue of necessity and to enrich our human life by contact with foreign forms.

CHAPTER VI

SOME EXTERNAL CONDITIONS OF STUDENT LIFE

1. *In General.* During the nineteenth century German student life lost the last vestige of its old forms. The custom of living together in colleges and *bursen*, peculiar to the English-American type of universities since the Middle Ages, has almost entirely disappeared from among us; in Protestant territory the Tübingen *Stift* is the sole memorial of the past; among the Catholic theological faculties more is retained. And here and there modest beginnings of the new era show themselves. As a general rule the student, like any young business man or official, now rents a room somewhere by the month; renting by the semester is customary only in the smaller university cities. In like manner he takes his meals now here, now there, either as convenience or the condition of his purse may dictate. Social intercourse with families is generally rather limited; many a one, without relatives or letters of recommendation, spends years without such intercourse.

This state of affairs has its compensations, for each one can suit himself according to his means and inclination. But it also has its very serious evils and dangers. No one will maintain that a lodging in an overcrowded tenement-house among the laboring population of a great city, or in the down-town district which has been abandoned by the better classes, is an appropriate place for scientific study. Quiet, concentration, and comfort avoid such regions: frequently residence there is a constant and galling warfare with all kinds of adverse conditions, especially interruptions and noises, both musical and otherwise. Nor are the conditions suitable for the cultivation of the nicer habits of life; not infrequently they become very dangerous to morals; the student in a large city may accidentally get into

the most dubious neighborhood. And a mere change of residence gives no sort of assurance of improvement.

From this point of view the establishment of dormitories, especially in large cities, seems to be a pressing need. By means of endowments a few such establishments have recently been erected, and it is to be hoped that their number will be increased until every student who prefers to lodge and perhaps board at such a place rather than beat about as a nomad in the wastes of a great city can have opportunity to do so. I do not doubt that the German student will gradually get rid of his wariness of dormitories and the house rules without which they could not, of course, exist. The advantages which they offer—peace and order, the security against being fleeced, as well as against undesirable neighbors, the opportunity for social intercourse and scientific coöperation—are so great and self-evident that it will not be difficult to exchange a slight curtailment of personal freedom for a few such house rules. Or rather, the students will learn to respect such regulations as a grateful protection of their own peace and freedom. I cannot see what should hinder public-spirited societies from attempting to meet this need; this would not necessarily have to be a matter of charity.

Next to the lodging there is the *Kneipe* (tavern), the place for social intercourse and refreshment, which for a long time satisfied only the most modest demands of comfort and elegance. Latterly the new "national prosperity" has also become noticeable in the equipment of the taverns. And numerous student societies have built their own houses, or have had them built by their "old gentlemen" (*alte Herren*), sometimes at considerable expense and with magnificent equipment. Whether ways and means for intellectual enjoyment have increased in proportion to the increased demands upon the material life I have not been able to learn. If one may judge from the photographs of the exteriors and interiors of the society houses, which are now so often to be seen in all stories of fraternity-life, and in which the dice-box appears with the utmost regularity as one of the requisites of the *Kneip*-room, it would seem that the use of the very humblest means of social intercourse has increased rather than decreased during the last generation.

It is more pleasing to note that, so far as I can see, physical culture is on the increase. It cannot be doubted that this is simply indispensable if the body is to retain its freshness and elasticity, and the nervous system its health and strength. Excepting fencing, to which I will recur later, the most convenient form of exercise is gymnastics; many who have learned to appreciate it at school continue it diligently at the university; many *Turnvereine* attract the devotees of this form of exercise. In addition to these, games and sports of all kinds are beginning to come into favor. Perhaps recent influences from abroad have led to the organization of student societies for this purpose and at the same time attracted the attention of the older societies. It ought to be noted, also, that in addition to the gain in physical health and strength secured by such means, all earnest training of the body tends to strengthen the will. Nor should the merely negative benefit be despised. There would be rather less sitting around the beer tables and not so much idle talk. Of course, athletics have their dangers also. They have a tendency not only to demand one's last bit of time and strength, but also to impair somewhat one's judgment.

The distinction achieved in these athletic exercises usually assumes such an exclusive importance that all other things become indifferent; even bicycling and chess, when conducted as a sport, easily become the center of interest, not only of one's own life, but of human life in general. It is true, at present we are still far from excess in these things and it may, perhaps, be asserted that they are less adapted to the German's character than to the Englishman's, to whom horse racing seems to be a kind of second nature. Rich people who are casting about for a useful channel for the expenditure of surplus funds, could find here an opportunity for serviceable generosity in the establishment of play-grounds and the equipment of athletic clubs. If the student should take with him from the university the habit of exercising at the play-grounds, such practices would gradually penetrate into the lower strata of the people, thus repressing injurious customs of whose popular adoption the academic world is not guiltless.

I also call attention to travelling. Since the days when

students wandered through the land with light hearts and lighter purses, repaying hospitality with gay song, the delight in travel has never quite died out. It received a great impetus during the nineteenth century, and, in fact, there exists no pleasanter method of recuperation from intellectual toil than a wholesome journey in company with cheerful comrades. And where is there another people blessed with a more beautiful country in which to roam about than our Germany, with its inexhaustible wealth and variety of scenery, from the glittering glaciers of the mountains to the peaceful forests and lakes of the lowlands and the solitude of the coast. And how much history is told by the old towns and castles; and how much the various families of the German race, long separated and internally and externally different from each other, have to say to each other!

In conclusion, a remark about the expenses of the course. Not including vacation, a year's expenses will generally fall somewhere between 1000 and 2000 marks, the average lying, perhaps, between 1200 and 1500. A small proportion of students probably considerably exceeds the higher limit; a larger one remains below the lowest. Not a few earn a larger or smaller part of their support by tutoring, correcting papers, and stenographic work. In addition, stipends and postponement or remission of fees are of some assistance to the needier ones. The stipends consist partly of public funds, and partly of private endowments, mostly quite old, which explains why the older universities are richer in this kind of equipment. Of course on account of the decreased value of money, the income of many of them has become very meagre; in some instances, not more than a pitiful alms. It has frequently been remarked that, when such is the case, they are almost degrading and have a directly injurious effect; a combination of several of these into a sum sufficient to furnish a respectable income, which might be bestowed for merit, would undoubtedly be beneficial to academic interests, but can scarcely be brought about on account of the legal obstacles in the way. I have already mentioned (pp. 125 ff) and shall not here bring up again the growing expense connected with university life and its influence upon social selection, as well as the attitude of society towards needy students and the difficulties with which such students have to struggle.

I add a remark or two concerning the year of military service. Coming, as it does, regularly during the years to be spent at the university or in the period of practical preparation for professional service, it is, undoubtedly, from one point of view, an abridgment and disturbance of the course; and also an abridgment of academic freedom, for the military principle and that of the university represent the antithesis of subordination and freedom. Intelligent persons, however, will not doubt that the gain in personal discipline more than compensates for the loss.

During the century which has just closed the army has become a second great educational institution for our people, in addition to the school; aside from a number of elementary and important virtues which it inculcates, such as order and cleanliness, punctuality and discipline, it fills the sons of our people, even those from the lowest classes, with a national self-esteem and personal self-respect; it makes able-bodied men of them, parts of the power which decides the destiny of nations. It is, therefore, perfectly reasonable that the educated youths should also pass through this school of manliness; not only for the sake of the army, which thus secures some indispensable elements, but for their own benefit as well: there is no better opportunity to learn how to obey and command, the two essential features of official activity, nor a better opportunity to understand and respect the people. For that, we may surely hope, is the usual result of service in an army which, like the German, is drawn from the entire population: respect for the people as a whole, not pride and contempt for the lower classes. Should an occasional officer of the reserves reveal such feelings we would certainly say that he had not comprehended the lesson which service in the army intended to teach him.

It would be well if the year of military service were placed, whenever possible, at the beginning of the student's university course. Following directly upon the time spent at school it offers a wholesome counterpoise as well against excessive and one-sided brain work, by developing and strengthening the whole physical system, as against too much unbridled luxury, by introducing law and order first into the outward life and then into the character and will. If further it should occasion a hunger

for intellectual nourishment, as a rule not very potent at the end of the school period, the year would be well spent in every respect.

2. *Student Organizations.* The complete isolation in which the student finds himself at the university is the cause of his strong inclination to organize societies. The independent societies are as characteristic of German student life as life in the colleges is for the Englishman. Based upon free will and individual choice many of them are associations of such unity and devotion that scarcely any other independent societies can equal them. This is especially true of the old color-wearing fraternities based upon long and vigorous tradition. They supply the student with something like a home at the university. Usually the relations here formed continue to exist beyond the years spent at the university, and not seldom they bind the members together for life in devoted trust and friendship.

In many quarters one nowadays encounters the severest criticism of these societies and their foolish regalia. I am familiar with the conditions, at least to some extent. I am also acquainted with the dangers and the dark side. I would by no means advise indiscriminate membership, nor would I urge everybody to join them; and yet I cannot join in their general condemnation. It is desirable and wholesome that other societies should also gain a foothold, societies with broader purposes; but these old societies too have their justification and value. There are certain things which they can achieve better than other societies. They are accustomed to think of themselves as a school of life and character-building. Perhaps all of them are not, or not all are such in a good sense. But, on the whole, their estimate of themselves is correct; as a school of self-reliance many of them are not to be despised. Self-reliance cannot be attained in solitude; a close voluntary association is probably the most favorable environment for this purpose. The *Verbindung* is such an organization; it is a society based upon the free consent of the individual and governed by the will of the whole. It is, therefore, an excellent schooling in social life. It affords constant opportunities for practising subordination to the group-life, and at the same time for preserving and asserting oneself as a part of that life. All social life depends

upon these two things: the ability to adapt oneself and the ability to assert oneself, to live for the group and to take care of one's own interests in the group. He who lives to himself, or selects his company from day to day according to his passing inclination, or, his environment becoming uncomfortable, escapes from it to another, readily falls into a kind of effeminacy which will cling to him in every position in later life. In one of these fraternities a man learns not only to associate with pleasant friends, but also how to get along with unpleasant companions, to compete with superior ability, to live in peace with the unfriendly, to brave the opinions of the majority; he learns, to quote from Goethe, how to establish his lines of defense against everybody. And, in addition, these fraternities supply daily opportunities for practising all the functions of social life; to obey and to command, to confer and decide, to make laws and apply them, to judge and adjust disputes, to combat and to get along amicably with external friendly and hostile forces. Thus these fraternities really become a kind of preparatory school for public life; they develop a capacity for self-control and government; they impart to their members a certain self-assurance which can still be recognized in the later life of the old fraternity students. These are the things which keep the older men loyal to the fraternities and so often determine them to introduce their sons into them. Even though all sorts of youthful exuberance and folly are connected with them, they are tolerated because these other things cannot be had without them. Human beings do not seem to be able to get along without a little *paedagogia puerilis*; are they not even found in the state and in the church?

In order that the fraternities shall secure for their members what they were intended to do, they must meet certain general requirements. I point out the following:

- (1) They must have a sufficient number of members. The fraternity must not be too small. When the membership is reduced to a half dozen or less, as, with our inclination to excessive division, sometimes happens, no real social life can be expected to develop; frequently some one personality becomes altogether dominant, and the individual members are so com-

pletely occupied with the aims of the fraternity that their own interests are entirely neglected. The larger fraternities afford their members more elbow-room; all kinds of capacities and personalities come into play; conflicting purposes develop, which give rise to wholesome and impersonal opposition and lend character and life to the society.

(2) They must bring a number of different elements together: members of different departments, different nationalities, social classes and conditions, political and religious views. Exclusiveness lessens their value. It is an unwholesome symptom when student societies are based upon political or religious views, and such views are used to exclude those who think otherwise. It is an unamiable trait of the Philistine in the German that makes him delight in getting off into a corner with a few kindred spirits to indulge in mutual admiration and the defamation of all outsiders.

It is essential to the health and vigor of life, especially youthful life, to come into contact with different personalities and contrary opinions, in order to enrich one's own mind or to assert oneself in conflict. All kinds of people with all kinds of views are found at the English-American colleges; this results in wholesome competition and a manly respect for an opponent. Confined within a narrow sphere, the mind itself becomes narrow and the conviction grows that beyond the limits of one's own coterie only evil is to be found. Even our politics are still characterized by such shallowness; we feel that we cannot have any friendly dealings with the man who does not belong to our party, or who subscribes for the opposition paper: he is looked upon as an enemy.

(3) The society must not interfere with the serious prosecution of studies. Occasionally it may happen that the claims of the society so occupy an individual student that many an hour is lost which might have been given to study; but there are also other ways, and not always as innocent, in which time can be lost. But the society must not so engage the student that study is made impossible for him. There ought always to be plenty of time to attend lectures, and, after a while, to do real work. If, as has been asserted, there are or have been societies

which actually forbid attendance upon lectures, they cannot be too severely condemned.¹

Leaving such societies to the contempt which they deserve, it should be said that any society with any regard for itself and its good name, for its reputation among sensible men, will make it a point of honor that its members shall not only be good fraternity men, but must also do honest work as students, must at least pass the examinations. And there are societies which rigorously enforce at least the last mentioned qualification by continuing the membership of students leaving the university only after they have passed an examination *rite*. I do not, therefore, believe that it is universally true that the societies are the real sources of laziness and the contempt for study. There may be societies of which this is true, in which an unholy confederacy of laziness and conceit are in control, in which labor is looked upon as plebeian, as good enough for those who do not understand and have not learned anything better. But such are not the rule. I do not believe that the students in the societies supply a larger quatum of triflers than the student body as a whole. In many of the fraternities "loafers" are practically unknown.

(4) The individual must beware lest the society cause him to lose sight of the serious purposes of life. For a time it may, indeed, be his chief interest, it may control his views on all things human, *dulce est desipere in loco*. But, back in his consciousness somewhere, there must always be the feeling that all this is a pleasant game permissible to youth. Life presents other and more serious problems. And this conviction may temporarily be put aside in careless hours as the future concern of Philistinism, provided one always remains conscious of the duty and ability to quit the world of mummery at any time for the stern reality.

¹ Goldschmidt, *Rechtsstudium*, p. 276, asserts that recently in certain very influential circles laziness, which, as a matter of fact, has existed before, has been raised to a "fraternity principle, and is enforced against obstreperous members with all the means within the power of the society. Whether 'infamous expulsion' already follows upon attendance upon lectures I do not know, but it is notorious that students in many of the societies either do not attend them at all, or, if they do, visit them without the 'insignia of their honor'—that is to say, secretly, like other places that are forbidden to 'respectable' people."

I believe, moreover, that the seriousness of life, which is increasingly making itself felt among all classes of the population and calling for the fullest exertion of strength, will also have an influence upon student life. If the German *Michel*, droning away his life well-nigh asleep, is a type that is passing away, it may be hoped that the type of fraternity student who spends his time carousing, duelling, and making debts, will, at no distant time, continue his existence only in the *Fliegende Blätter*. I am of the opinion that there will not be room much longer among Europeans for those who see a contradiction in honor and labor. In this respect the year of military service also has its influence upon student life.

To him, however, who finds it altogether too difficult to wait in patience until this kind of German student life and its absurdities shall be a thing of the past, whose judgment is guided by the argument that the destruction of the fraternity system must precede the rejuvenation of our student life, who lends himself to the hope that from that moment discretion and wisdom will control our academic youth, I wish to commend a description of English student life in V. A. Huber's *Geschichte der englischen Universitäten* (II., 444 ff), and the reflections which he appends thereto. He will find that foolishness, laziness, and lewdness have always found their way even into the respectable colleges. These vices, Huber thinks, are, on the whole, perhaps neither more nor less prevalent in England than in Germany; but he finds that they have a less specific character in England than with us. While in Germany such folly and madness exhibit themselves in the fantastic garb of academic clowns, and strike absurd and swaggering attitudes, there is little that is peculiar about them in England, where they have rather the same form and color as among the youth of rank and wealth outside of academic circles: sport, gambling, drinking, lewdness, debts—all in peculiar contrast to the outward decorum and respectability of college life.

I do not think that we have any reason for desiring a change; the *naïveté* and openness, perhaps even the impudence and rudeness, peculiar to our student-life, are really more tolerable for us than the enforced hypocrisy in which English cant is wont to clothe itself. On the whole, we may, perhaps, say with Huber

that the moral cost of these practices must be esteemed a cheap and appropriate price for indispensable training of character through experience and mutual instruction.

3. *The Different Kinds of Societies.* The color-wearing fraternity (*farbentragende Verbindung*), was formerly the predominant society and still typifies the German student in the popular mind. The colors proclaim it to the public as a student fraternity.

Here, again, there are three essential kinds: the *Corps*, the *Burschenschaften*, and the non-duelling, so-called Christian societies, besides and between which a few other varieties also occur.

The *Corps* are historically connected with the corporations of the old universities (*Landsmannschaften*), and occasionally with the *orders* (*Orden*), secret societies with political tendencies which originated during the last half of the eighteenth century; their names, mostly taken from German countries and peoples, indicate this origin. At every university there is a smaller or larger number of *Corps*; all of them together form a great federation. This group, which is now recruited only from the ranks of the nobility and wealthy, is characterized by the great emphasis which is placed upon outward appearance and expenditure. With a strong inclination to stand apart from the mass of students, it also lays claim to be the *élite* of the student body and the born leaders of the nation. The latest development of our public life has been surprisingly favorable to the pretensions of this group; here and there membership in a *Corps* is accepted as a mark of superior political gifts and as a kind of claim to a desirable position. On the whole, ever since the origin of the general *Burschenschaft*, and in contrast to it, the *Corps* have always had the reputation of being on the right side, politically.

The *Burschenschaft* had its beginning during the wars for German independence. It arose as a general organization in opposition to the old, exclusive *Landsmannschaften*, and was not originally intended to be a close student fraternity, but rather to destroy the narrowness of the old fraternity system with its resulting evils. The controlling idea was to raise the German student body from the dullness and rudeness that had clung

to it from the seventeenth century to a higher plane of ethical-intellectual life; it was thus historically related to Fichte's and Jahn's endeavors for a national revival of our youth, especially our academic youth. At the same time new conceptions of the position and duties of the academic youth in the public life of the German people began to take effect; filled with love for the German people and the Fatherland, and not less with a conviction of the hopelessness of the division into so many small states, the cause of all the misery and disgrace which had come upon the German people, the *Burschenschaft* devoted itself to the cause of German unity and independence. The opposition of the existing states, the anti-rational policy of Metternich, by which even Prussia allowed itself to be hoodwinked, the hatred of the reactionary party, the anxiety of the police, forced the organization into paths originally not intended; suppressed and persecuted, it sometimes assumed the form of a secret political society. But, in spite of occasional aberrations, it has the credit of having transformed the idea of national unity into a vital force in the consciousness of the German people. To this must be added the further credit of having done not a little toward cleansing German student-life of much of the old filth which had clung to it. That the utter shamelessness, coarseness, and licentiousness characteristic of student life in the seventeenth and eighteenth centuries—look at the albums and songs of the times—have disappeared at least from the surface, is doubtless due in part to the general progress of morality, perhaps also to *cant*, which is no longer unknown even in Germany; but the old *Burschenschaft* with its higher ideal of student life was also responsible for the change.

The modern *Burschenschaften*, contrary to the original intention, are exclusive student societies, of which usually several exist at each university. In many respects they have approximated the *Corps*, both in outward appearance and in their aspirations. Nevertheless, much of the original spirit and life has been retained by them, especially by the older and stronger ones, whose roots have struck deeper into the history of the *Burschenschaft*. Nor have they lost the consciousness that academic youths have a national duty to perform, though for the present there is no need of directly influencing political life. The duty

of to-day in no wise differs from the one which actuated the old-time *Burschenschaft*: those who are destined to enter the ruling classes of the people are in honor bound to show themselves worthy of this distinction by the seriousness of their purpose, and to prepare themselves for the duties of their positions. To this end it will always be proper for the *Burschenschaft* to cultivate not only loyalty to the Emperor and the state, the embodiments of the national unity, but also independent and patriotic sentiments. It is right and proper that, in contrast to the pride of the exclusive set, the members of the *Burschenschaft* should glory in the fact that they are the sons of the people, ever ready to defend the common rights and liberties. Perhaps the task has never been a more necessary and honorable one than in a time like ours, which seems so little disposed to such things.

Since the year 1830 a third type has come into existence—the Christian societies. In form and outward appearance quite like the others, they differ from them especially in their rejection of the duel. They agree with the old *Burschenschaft* in the acceptance of the “principle of chastity.” Their members belong, preponderatingly, to the theological faculties, just as the large majority of the *Corps* belong to the juridical faculty. The *Burschenschaften* are best adapted to bring together the members of all the faculties, since they probably pay less attention to social and class distinctions.¹

In addition to these old societies, which look upon themselves as the real representatives of the German student body, even though numerically they are only a fraction of it, especially at the large universities, numerous other associations have more recently come into existence: scientific societies, particularly in the philosophic faculty, but also in the theological; societies

¹ In the literature on the society system the following writings are worthy of notice: W. Fabricius, *Die deutschen Corps*, 1898; *Das Corpsleben in Heidelberg während des 19. Jahrhunderts*. Heidelberg, im Selbstverlag des S. C., 1886. An indictment against the system is: *Meine Gymnasial-, Universitäts-, und Dienstzeit, von einem jüngeren Beamten*, Leipzig, 1888. Among the descriptions of the *Burschenschaft* and its history I refer to Raumer's *Geschichte der Pädagogik*, vol. iv.; Hase, *Ideale und Irrtümer*; Fr. Reuter, *Geschichte der Erlanger Burschenschaft*. There are some interesting facts about the origin of the Christian societies (in Erlangen) in Ebrard's *Erinnerungen*.

for the cultivation of art, music, gymnastics, etc.; as well as societies with political tendencies, like the Society of German Students; to which may also be added the Catholic societies. The form and purpose of these societies differ greatly; many of them have or aim at an exclusiveness similar to that of the old color-wearing societies.

I shall not discuss the matter further, but will add a few remarks concerning one or two general questions connected with the society system.

In the first place, a word concerning the fencing bout (*Mensur*) and the duel to which it is in a certain sense related. I cannot and do not desire to discuss the duel at length in this place. Any one who is interested in my views on it, will find them in detail in my *System of Ethics*. I merely remark here that I am not one of the uncompromising opponents of the duel; much less, assuredly, am I one of its unqualified friends. I cannot, therefore, hope to secure either the approval of those who regard every duel as a "disgrace to the century," or of those who consider it indiscriminately an "affair of honor" upon which neither reason nor morals have any further right to sit in judgment. I am strongly of the opinion that the majority of duels are a wanton sport with one's own or another's life, and that many of them are no better than despicable manslaughter, yes, atrocious murder. To my mind it is terribly stupid and shameful that "society" can tolerate it by calling it an affair of honor when a miserable scoundrel first wantonly insults a man and then shoots him down according to the disgraceful niceties of the code. An "affair of honor!" yes, and then it treats the murderer with a certain respect as a cavalier bedecked with a new glory. It is the fundamental error of the "class morality," and of the law infected by it, the *Herrenmoral*, that it looks upon all duels indiscriminately as "affairs of honor," that is to say, as having originated in transactions prompted by honorable motives, and therefore necessarily excluding any punishment which would touch a man's honor. It is high time to do away with this superstition and direct the courts to punish the person responsible for the duel, which does not necessarily mean the challenger, as a slanderer and homicide or murderer, as the case may be, with the severest punishment. Only such an one

ought to be exempt from disgraceful punishment, or rather from any punishment, who felt himself compelled to meet the despoiler of his honor. For, and this is the other side of the matter, it will occasionally happen that a man cannot persuade himself to call in the assistance of the courts when his honor is concerned. There are cases in which the court proceedings would be harder for the injured party than the punishment for the offender. It would be proper to retain the duel as a possible expedient in such cases, with the understanding that certain legal consequences would follow according to the circumstances of the case. The modern, "socially" compulsory duel, which secures against disgraceful punishment both the dishonorable scoundrel, the fellow ripe for the penitentiary, as well as the gentleman who can see no other way out of a difficulty, is a nuisance which cries aloud to heaven for redress, as loudly as the outrage which is committed when two young fellows who, under the influence of liquor, happen to jolt each other, are compelled to face each other with pistols. Their blood will be demanded of those who created and tolerate the crazy system.

I address myself, next, to the ordinary student-duel, or rather fencing bout (the *Mensur*), in which life is never in danger. Here also I can neither absolutely condemn nor approve. Of course, I cannot approve of it when some old ruffian roves about the streets, making them insecure and seeking everywhere a cause for quarreling in order to boast of the number of his duels; with other reasonable people I consider such conduct absurd. And when anybody wastes his time at the university by giving up a day or two in each week to assist, either actively or passively, in fencing-bouts, and spends the remainder of the week, à la Falstaff, in boasting of them: "Here I lay and thus I bore my point," it is not merely absurd, but a disgraceful waste of time. But, on the other hand, the fencing bout really has its place. In order to alleviate the little frictions that will occur among young people, without bothering the academic authorities and courts, the fencing bout, in my opinion, is a not wholly unsuitable method. And I would not even condemn utterly the regular *Mensur* (the *Bestimmungsmensur*) provided it is kept within reasonable bounds and does not lead to reckless waste of time. And that for this reason: physical exercises ought to be

encouraged, and fencing is a form of physical exercise, perhaps not the most perfect, but it has the great advantage of popular recognition and practice. But it is the *Mensur* which, primarily makes these fencing exercises so interesting, and keeps the practice alive. In addition, it must be admitted that the *Mensur* is also a practice and proof of courage, not, indeed, of the highest kind, but nevertheless of a certain control of the will over the physical body. And this also may be said: it assists somewhat in giving a person a position, among his own kind, which depends upon personal worth and not upon the size of his purse. The rapier puts all upon an equal footing.

An American, Professor J. M. Hart, has this to say in a book on the *German Universities* (pp. 81 ff), which is, throughout, full of sound sense: "Duelling, it must be admitted, is an evil. But there are others equally great and much meaner. I refer to 'hazing,' 'rushing,' 'nagging,' and 'smoking-out.' . . . The German system, rough and brutal though it may be, is at least manly. It holds the student to the strictest accountability for all that he does and says." Perhaps that is saying too much; the *Mensur* is not a preventive of other evils and, as now developed, blocks the way for much that is desirable, especially—not to mention devotion to intellectual pursuits and the higher purposes of life—it stands in the way of physical culture and sports. Nevertheless I should say that its suppression by the authorities, which is undoubtedly possible, would not be advisable; so long as it is not superseded by what is obviously better, it ought to be tolerated as a preventive of the greater evils that would ensue upon its forcible suppression. In some way or other the exuberance of youth will out; the *Mensur* is not the worst way of expressing it. *Ferrum trahit virum*; but it also helps to develop the best in man.

But, to my mind, the drinking which is still somewhat systematically encouraged by the societies, is worse than the *Mensur*. The abolishment of this compulsory guzzling, for such it is, wherever the custom still exists, the different fraternities not being equally guilty in this respect, should be a point of honor with them. To continue a practice which compels a man to sacrifice his capacity for work and his intellectual freedom,

and perhaps even ruins him physically and mentally, in order to obey the injunctions of a drinking code which dates back to the period of the German people's deepest degradation, the wretched seventeenth century, must be an outrage to every one who feels that he owes anything to himself, his family, and his people. I am not a Puritan and have no desire pharisaically to count the glasses which are emptied during an occasional cheerful evening; but to feel oneself compelled to drink day in and day out, morning and night, ought to be beneath the dignity of a gentleman. The semi-debility which ensues and finally becomes chronic is merely the disgraceful consequence of such disgraceful servitude. It is possible that the custom is worse among the various obscure societies than among many of the old *Farbenverbindungen*. Here also the old *Burschenschaft* was properly alert to the demands of personal honor. Does its modern successor still cherish its traditions? Then it has here a task worthy of its efforts.

Finally, just a word concerning sexual life. Here the *Burschenschaft* has performed an inestimable service: its organization marked an epoch in the attitude of the students toward sexual immorality; incontinence, even with those who do not forswear it altogether, has since then ceased to be a shameless matter of course or even the subject for ruffianly braggadocio as it was in ancient times. An honorable and manly pride rebelled against all this at the period of the *Burschenschaft's* organization, and placed the ban upon association with lewd women, as unworthy of a student and ground for exclusion from the society. It is to be regretted that the old sense of honor upon this point is no longer so stringent even among many of the *Burschenschaften*. If "smartness" and "spruceness" have taken its place, the exchange is not a wholesome one. If the *Burschenschaft* has no more respect for itself than to be a second edition of the *Corps*, it has no warrant for its existence.

BOOK V
THE PARTICULAR FACULTIES

INTRODUCTORY

THE following remarks are intended to characterize, briefly, the ground covered by the several faculties on the one hand, and the practical professions to which they lead, on the other. * In the former case the object will be to describe the scientific work that is done and its incorporation into the sum total of possible knowledge, in the latter case, to point out the significance of the calling and the demands it makes upon the individual. It is possible that what I may have to say will be of some slight service to a man in doubt about the choice of study and profession, by causing him to weigh the essential points.

By way of preface I offer a general suggestion concerning the choice of a profession and the motives that are, or ought to be, considered in so doing.

The learned professions have two aspects, the scientific and the practical. Hence arise two legitimate motives for study: devotion to and capacity for a science, and the conviction that one is called to practise a profession. Both of these considerations, as a rule, assist in the decision; inclination for some particular subject will normally assert itself even in the higher grades of the preparatory school, during which the direction of one's special endowment begins to be revealed; while a love for some particular calling is sometimes kindled by the example of some celebrated man. This distinction ought also, perhaps, to be observed, that more often it is a decided predilection for a particular science which leads to the choice of the philosophical faculty, while it is rather the thought of the prospective profession that makes disciples for the higher faculties; all of which corresponds to the character of the faculties and the studies there pursued: the philosophical faculty is the theoretical or really learned faculty, while the others look more to the needs of the professions.

To these motives for the choice of courses, which are accepted as the important and really legitimate ones, at least by the students themselves, other considerations must be added: prospective social standing and position, certainty of support, and the time element. As a rule these have a place in the deliberations of the parents in addition to the estimates of the cost and the time required before an independent position can be achieved; and who would really exclude them from consideration in any case? Among the secondary motives influencing the young men we may also mention the prospect of freedom and pleasure held out by academic life. The fact, also, that one's father, or a comrade, has gone to college will lead to a decision; and here and there even the mere perplexity as to what else to do will send a man to the university. The long scholastic course has been finished, the certificate of graduation had to be obtained; in the meanwhile the right time has gone by for stepping into some other calling and one really is not in touch with those lines, which may easily be the case with the families of officials, who do not belong to the industrial classes. Hence the choice of university study follows, to some extent, the principle of least resistance.

Nor shall I criticise any of these motives, provided the old saying with which parents used to comfort themselves and their sons for their choice of an unloved woman as a wife becomes applicable here: love comes after the wedding. It not infrequently happens that love for a science is begotten by the study of it, and that love for one's profession comes with professional activity, just as such loveless marriages often turn out satisfactorily and happily: human nature has large powers of adaptation to given situations. Of course, if this does not happen, if there is no pleasure in study, if there is no love and devotion for one's professional work, then a blasted life is the result; and society is cursed with a misfit who goes through life a mere haveling for his bread and butter.

It cannot be denied that this danger is on the increase, owing to the transformation of the academic professions into public offices. These professions are attractive on account of the social position and the certainty of support which they promise even beyond the years of efficiency. At the same time they guarantee to the

applicant who can show that he possesses a certain amount of preparation and has placed himself in line, a position and livelihood in due time, and then, step by step, increase of salary and rank by the simple completion of his years of service. Hence they prove especially attractive to those who lack initiative and energy, who regard being pushed along as the most comfortable means of progress. And so it frequently happens that those largely crowd into these professions who are least fitted for them. The principle that a profession is a public office really means that public and not private interests should be the deciding factor. Its function is to serve the great ends of social life,—an honorable service to which, as a matter of fact, only public confidence born of excellence should call a man. This is how our ancestors conceived these professions and therefore called them liberal professions: professions not degraded by pay, but administered without compensation by free men. Modern democratic society has chosen to transform what has heretofore been purely a position of honor into a salaried office, a change which the development of the modern state has made necessary: when an office engages a man's entire energy, it ought also to relieve him from all care of his support. At the same time society thereby secures for the first time an actual liberty of choice, since the unsalaried office is possible only for the wealthy. On the other hand some security against the temptation to use the office for private gain is also obtained: human nature does not love to work without reward; the "honorary offices" of the Roman republic show to what the system of unsalaried public offices leads.

The system of salaried offices is, therefore, unavoidable. But it must not be understood to mean that the office is to be degraded to a commercial plane or mere means of livelihood. The idea should be that a public office is a service in which the individual does not primarily look for position and support, but for the opportunity of serving society as a whole: the *officium*, not the *beneficium* is the main thing; duty, not pleasure.

CHAPTER I

THE THEOLOGICAL FACULTY

1. *Theology and Theological Study.* According to ancient custom the theological faculty occupies the place of honor. But it is more than doubtful whether modern times would give it that place. It is now scarcely mentioned in the same breath with the sciences, the peculiar pride of the present day. Numerous representatives of a scientific radicalism are inclined to exclude it altogether, or to relegate it to the past. Theology, they assert, is a science of things of which we know nothing, or rather, of things which do not exist, of a supernatural world created by the imagination; and the theological faculty is a bald anachronism. Theological students can scarcely avoid meeting with such or similar opinions.

It might be said in reply, however, that theology is, by all means, a science of a reality, and a reality, moreover, of which knowledge is attainable, namely, religion. Whatever may be said of the reality of the objects of religious faith, the faith itself is really an historical fact in human life. And, so far as we can see, it constitutes one of the most important facts of that life; everywhere in the history of the past, religion appears to have been the center of activities; Christianity, Buddhism, Islamism, Catholicism, Protestantism, are its great themes; and by religion the souls of nations have been fashioned. And, therefore, so long as man himself remains the most important part of reality for man, religion will continue to be a most important and attractive study. This, it seems, even those must admit who are of the opinion that religion must now be counted among the passing illusions of humanity. And hence historical theology, the study of religion in the light of history, will undoubtedly remain as an important task of science. It

is likewise true that for us the Christian religion will be the focus of this study; even those who regard it as a mere optical illusion to say that Christianity has given us the highest form of religious life we know, must admit the fact that it has become and continues to be to this day the life of the mightiest civilization, the historical institution of the occidental world, and an object, therefore, of historical study surpassed by none in importance. And were not all the other historical relations mediated for us by Christianity and the church, our relations to Rome and Greece, to Israel and the Orient?

But I believe that there is still room for dogmatic theology also. Those will deny this who recognize in religion nothing but a "congenital affliction" which, however, we are about to shake off, in order to live entirely according to "science" for the future. So far as I can judge, this opinion does not rest upon knowledge of fact, but upon an expectation and prophecy of what is supposed to be desirable for the future. But over against this view there is the view of those who regard the effort to transcend both a highly fragmentary scientific knowledge with a complete world-view, and the scientific view of reality with an interpretative faith, as a normal and persistent function of the human intellect. If religious faith, especially Christian faith, continues to be the basis of the occidental world-view, then, historical change and development being taken for granted, the necessity for a dogmatic theology will also continue. It will always be an indispensable task to explain what this religion is, how it is related to our thinking and our ideals of life, how much of it is due to a living conviction of the present, how much of it, as an inheritance from the past, is worthy of reverence or forbearance, and how much of it is to be regarded as a mere petrification of a former faith. There will always be the problem to conceive of faith and its objects in such wise that they can be harmonized with the scientific conception of natural and historical facts.

This task is doubtless more difficult to-day than ever before. It cannot be denied that, since the beginning of modern times, advancing scientific knowledge has more and more deprived the objects of faith of the forms in which they were formerly conceived, yes, of the very possibility of their representation at all.

Since the great revolution that has taken place in our views of the cosmos, we can no longer, with Aristotle and Aquinas, think of God, the eternal and holy will, whom we worship as the great First Cause, as "the prime mover," enthroned beyond and above the finite world. Since the world has constantly become larger and man smaller the human understanding has shown itself less and less adapted to serve as a model for the Creator. Beyond all doubt, epistemological reflection has divested our thinking of its anthropomorphic character, which it can never again adopt in the old naïve sense. But, it can safely be asserted that by this very means the place of faith has been assured and enlarged. It is Kant's opinion that if we were in possession of an exhaustive absolute knowledge, there would be no room for faith as a special function; speculation would take its place. If, however, our scientific knowledge is confined to a mere fragment of reality, and if we cannot adequately comprehend this small portion, our knowledge being unable to pierce beyond the phenomenal world, then we are compelled to depend upon our faith for the completion of our view of the world. But this faith must be a reasonable faith, which can harmonize our possible and appropriate thoughts as rational beings with the Ideas which, as moral rational beings, we cannot but have about reality. If we call the function of this union of epistemological-metaphysical thoughts and practical ideas rational theology, the necessity for it will not only not be removed by the progress of modern science and philosophy, but its urgency will be increased. The problem of dogmatic theology, however, would be, to relate the faith-content of historical religion to this rational theology in order to demonstrate the unity of the religious and scientific consciousness for every age.

This would, at the same time, demonstrate the indissoluble relation of theology to philosophy. Theology, as a theoretical science, ought really to be a part of the philosophical faculty: the history of religions should find a place in general history, the doctrine of God and the world, of knowledge and faith, of life and its values, in metaphysics and epistemology, in ethics and the philosophy of religion. Dogmatic theology, however, would represent a kind of applied philosophy of religion, based

upon the traditional faith of a given historical sphere of life and its recognized values and norms.

The necessity for a separate theological faculty is due to the social need of scientifically trained religious teachers. He who does not admit this need will deny the justification for a faculty of theology and would turn over the study of religion to the philological-historical sciences, that is to say, to the philosophical faculty. But it might be possible to convince even him that his personal lack of a sense of need in this particular cannot be a criterion for others, that the time will never come when there will not be clergymen, even if he has no need for their services, and that there will be clergymen even if the universities should cease to regard it as their business to give them a scientific training. A glance at Catholic countries or the United States will convince him of this. The abandonment of theological education by the universities would merely mean that the clergy would no longer receive their training at scientific institutions, but at ecclesiastical seminaries. This would, beyond all doubt, occur in Protestant countries as well, the very moment the theological faculties were abolished. It therefore becomes a question whether such a state of affairs would be more salutary than the existing conditions for, I will not say the religious life, but for our intellectual life, for our national culture, and, finally, also, for our public life, for the unity of our thought and feeling, for the peaceful development, even, of our national and social life. The Catholic nations with their profound and radical cleavage between orthodox churchmen and unbelieving free-thinkers, which controls their entire public life, do not seem to me to argue for the affirmative.¹

2. *The Clerical Calling.* Just as theology has lost the first place among the sciences, so also has the clerical calling forfeited its former position as the chief profession, to which the supervision of all human affairs is intrusted. The Catholic church, it is true, has never surrendered this claim; and it must

¹ A. Harnack in an address, *Die Aufgaben der theologischen Fakultäten und die allgemeine Religionsgeschichte*, 1901, has admirably justified these faculties as they have been historically developed, against the demand that they be changed into institutions for religious-historical research.

be confessed that it is a necessary deduction from the Catholic conception of the church. If this actual church is an institution founded by God himself, and if the papacy has been commissioned as his vicegerency upon earth, then the right of final decision, in matters moral as well as doctrinal, cannot be surrendered. However, actual general belief nowhere corresponds to this dogmatic claim, not even in Catholic countries. Here, as in other instances, the legal claim was pushed to the utmost, long after actual ownership had begun to break down.

Among Protestants there is no such thing as a priesthood as a divine institution, but only a man-made office, that of the preacher and pastor. It is an office which, undertaken seriously, is second to none in significance and dignity, and, when properly filled, to none in influence. A clergyman who has the strength and courage to publish God's message to mankind, who stands by the individual during the most serious and important moments of life, pointing him to the last and highest goods and standards, who counsels families and congregations in their most important affairs, who dares to bring the occurrences of public life also to the judgment seat of the conscience, to the bar of God—such an one exercises a high calling, that of a prophet of truth.

It is a difficult calling by reason of the demands which it makes upon him who follows it. There is nothing popular about it, nothing that will serve to ingratiate. It is difficult, also, because of the hindrances and oppositions which it meets. In the opinion of many, to-day, it seems to be an impossible calling, one that has outlived its usefulness; since religion has ceased to be a matter of public concern, the public cure of souls has become a work of supererogation. Faith and practice are the private affairs of the individual, hence there is no need for a public functionary.

And, assuredly, there is neither place nor need for a mere functionary, a mere official, at least not among Protestants. But that does not mean that encouragement and guidance toward higher things, both in public and private affairs, are no longer needed. The need can be met, of course, by any true man who understands human nature, and he enjoys a great privilege who has such an one for a friend and companion. But

public encouragement is also needed, and this need demands some one who will not speak merely as occasion offers, and only from personal impulse, but in an official capacity. And if the office is in proper hands the craving for individual guidance and relief in matters of conscience will turn to him, because his office will facilitate both access and confession. It is true, and this is the chief draw-back, that just as soon as the calling becomes a public office and is endowed as such, suspicion attaches itself to it. It cannot fail that people will crowd into these offices whose concern is rather for the positions than for souls, people who preach the gospel in order thereby to secure a tolerably good living. From this, of course, the office suffers, and the just with the unjust. For the clergyman who wishes to reach souls the first and most difficult task is to overcome this distrust against his office by his own personality.

The direct way to accomplish this is by renouncing luxury and all selfish interests. The most evident form of this renunciation will always be voluntary poverty and humility. There is no more convincing proof that one's concern is for the cause and souls, nor a more convincing sermon on the worthlessness of earthly goods and the transcendent value of the heavenly, than voluntary renunciation. The power of monachism, the influence which asceticism, whenever genuine, exercises upon men, depends upon this. The Protestant pastorate also frequently offers ample opportunity for the exercise of self-denial, though not in such a visible form. But neither are there wanting opportunity and inclination for comfort and luxury, desire for the accumulation of worldly goods, and even a grim determination for possession and power. That such heralds of Christianity do not win friends for it is perfectly comprehensible.

Quodcumque ostendis mihi sic incredulus odi.

Touching this question, Harnack says (*Wesen des Christentums*, p. 62): "I do not doubt that the time will come in which wealthy clergymen will be tolerated as little as one tolerates a dominating priesthood, for we are becoming more sensitive in this respect; and that is well. It will no longer be regarded as becoming, in the higher sense of the word, for some one to preach

resignation and contentment to the poor, who is himself prosperous and zealous in increasing his possessions."

If the first prerequisite for efficiency in the clerical calling is to overcome the *a priori* distrust of the office by one's own personality, then the second is intellectual power and thorough and versatile education. Only that one can be a preacher and pastor, a teacher and adviser in matters of faith, world-views, and human affairs, who has access to everything which affects modern thought, who can appreciate all its questionings and doubtings. He cannot afford to neglect the natural sciences; for if he wishes to oppose the naturalistic view of the world which in our day controls such large circles of men, he must first be able to understand its presuppositions and estimate its scope. Just as little will it be possible for him to be indifferent to historical criticism and social questions; these also will meet him everywhere, either as questions of conscience or as grounds of opposition. Mere theological learning and firmness in dogmatics and apologetics are no longer sufficient, in fact, never were sufficient. If the clergyman wishes not merely to fill his office, but to win souls and guide them, he must also know their troubles and doubts, their thoughts and dogmas. It may be said that the more deeply a man has experienced these things himself, the better he can lead others, provided he has achieved freedom and certainty for himself. *Non accipit indoctus verba scientiae, nisi prius dixeris, quae versantur in corde ejus.*

And now, finally, two other things that are needed in the business of saving souls: wisdom and patience. Both can only be acquired in the school of experience. If, through large experience, one has learned to know human nature, without the loss of love and confidence, all the subjective conditions for the calling have been met.

CHAPTER II

THE LAW FACULTY

1. *The Juridical Course of Study.* The juridical faculty traditionally occupies the second place. The faculty itself, at least its students, are inclined to claim the first place, asserting that, since the clergy have lost the primacy, the jurists are the ranking class; upon them now devolves the duty of regulating all the most important affairs of life, as a recently deceased official of high position has expressed it. The result is that all those who prize political position and social prominence before all else, are striving to enter this faculty, regardless of whether they have any love for the subject or an inward call to the office. As a high state official once expressed it, with the exaggeration permissible in epigrams, the jurists wish to be something without learning anything.

It is the business of the juridical faculty to create the scientific knowledge of law and to equip the future administrators of the law with such knowledge. And since the state is the realm in which the law is applied, the science of government is necessarily included in the study of the law. State and law constitute the second great form of historical life, next to the church and religion. Between them these control all social life. Hence the many points of contact between them, as well as the frequency of conflicts. Nor can the science of sociology be excluded from the legal studies, for the life-activities of society are the objects of the law, the purpose of which is to keep them in channels that are not only secure, but in which also the interests of the individual and the many shall be at one.

According to the traditional scheme of the faculties, political science and sociology do not usually find a place in the juridical but in the philosophical faculty. For this there is an historical reason. Originally the law faculties did not deal with current common law, but with the Roman law and canon law, that

is, with an historical law and the law of the church. When the Roman law became current in Germany through the *reception*, the juridical faculty might conveniently have adopted these sciences. But the old order was continued: politics and economics, with ethics, were traditionally parts of "practical philosophy"; to these the seventeenth century added natural law"; in the eighteenth century the cameralistic sciences developed, and from these the political and social-economic sciences have evolved during the nineteenth century. Hence the juridical and philosophical faculties now both teach the theory of the state and jurisprudence, while political science still belongs to the philosophical faculty, except that here and there (Tübingen and Munich) the study has been assigned to a distinct faculty, and at two other universities (Würzburg and Strassburg) it has been incorporated into the faculty of law.

But what has thus come down historically can also be justified on the score of theory. Not only can philosophy not neglect the law, the state, and society, as objects of investigation, but the incorporation of political science (*Staatswissenschaft*) and social science (*Gesellschaftswissenschaft*) into the philosophical faculty assists in preserving their purely theoretic and universal character in a way in which it could not be done in the positive and practical juridical faculty. And this also can be said: it counteracts the tendency to exclusiveness and self-sufficiency in the study of law to compel a student to find such important and indispensable subjects outside of his own faculty. He is thereby continually reminded of the indissoluble connection between the law and the philosophical and historical sciences.

The science of jurisprudence is peculiar in that, more than any other science except Catholic theology, with which, for this very reason, it is to a certain extent formally related, it has for its subject matter a dogmatic and prescribed content, to which it is bound. It is here that the state, as the supreme will, penetrates farthest into the affairs of the universities. It is not the business of the science of jurisprudence independently to evolve the law out of the reason or the nature of things, but rather scientifically to elaborate such laws as owe their existence and validity to the authority of the state. Hence it is naturally more formal and dogmatic than any other science, Catholic theology

alone excepted, as has already been said. And in these days the emphasis upon this "positive" character of the science is not infrequently carried to such an extent that not only is none other than a "positive" law recognized, which is right, but not even is a study of law based upon principles, which lie beyond the domain of positive law, permitted; so great has the fear of and aversion to "natural law" become with some. Even if this represents an excess of positivism, consequent upon an earlier excess of rationalism, the first and real business of jurisprudence will doubtless continue to be the scientific elaboration of current law.

This is no slight task. It includes two things: (1) a comprehensive construction of current law, that is to say, the formulation of the concrete statutes of the law into a logical system in which all the legal conceptions and individual laws are developed from principles; and (2) the historical derivation of current law through the long historical development of legal conceptions and institutions. Hence the final aim is to explain the law and its transformations by the social conditions and the conditions of the state, and by the changes which these have undergone. This would imply a teleological interpretation of the law, first, of the law of the past, and then, naturally, of the law in existence to-day, which, after all, can only be understood as an historical product. With this would be directly connected the additional task of recognizing the necessary reforms demanded by the changes which in the meantime have taken place in the social, economical, and political conditions. Thus jurisprudence runs into legal politics (*Rechtspolitik*), as the last part of jurisprudence has been called, and this makes necessary the study of the philosophy of law, for political science is not possible without going back to the ultimate principles of all law. And the philosophy of law depends upon practical philosophy in general.

With all this the purpose of legal instruction has already been indicated. It embraces two points. First, instruction in the dogmatic knowledge of current law and training in the ability to apply it to concrete cases. The essential prerequisite for applying the law is not merely a familiarity with the statutes but rather a mastery of the rational principles of all law. The former

merely enables one to make a mechanical application of laws, whereas the latter leads to a vital grasp of the essentials from the standpoint of right. Second, introduction to the historical knowledge of the law, that is to say, a knowledge of the conditions of its origin and transformations. In this way only will it be possible to equip men who will be able to develop the law now current, that is to say, to create new law, an inevitable task, since the never ceasing movements of society are constantly bringing about new relations, which, in turn, call for new legal formulas.

For practical purposes the jurist needs, first of all, a dogmatic knowledge of current law. Hence the state, concerned with securing persons who can practise the duties of their calling, will insist primarily upon this and will arrange the examinations with this in view. For a really scientific legal education, however, historical knowledge will be of greatest importance. From a purely scientific standpoint the prevailing law is nothing more than the transient expression of a spiritual reality which exists only in an historical process, not unlike language. And just as a scientific knowledge of language over and above the mere grammatical, is only obtainable through historical studies, so likewise in jurisprudence: a mere knowledge of momentarily current law would be like the school-grammarian's knowledge of a language.

This gives rise to a kind of antinomy which makes the study of law difficult, the antinomy, namely, between the demands of practice and the demands of science, which every teacher and student of law must seek to solve in his own way. It is due to the character of the university as such that it is, on the whole, inclined to regard the historical as the really scientific method of study. An isolated law school, disregarding the interdependence of scientific pursuits which is illustrated especially in the philosophical faculty, would recognize its task to be, rather, the dogmatic exposition of current law and instruction in the practical application of it. This is one phase of the difference between German and French jurisprudence.

The study of the law is not supposed to be attractive; in no faculty are complaints against laziness, especially in the first semesters, so plentiful as in this one. This is due, probably, to two reasons: the one, subjective, and already referred to, that

the motives leading to a choice of the law are more frequently than in other lines purely external and accidental; and the other, objective, and peculiar to the nature of the subject itself, that it requires more than any other, a mastery of abstract definitions and formulas. With respect to the latter phase, a change for the better may possibly be expected. In the first place, the introduction of practical exercises in illustration of the lectures will assist in enlivening the study from the very start, for every application of a mastered definition in the solution of problems adds value to its possession and increases the zeal of the student. How would the acquisition of a foreign language be possible without the constant application of the newly acquired rules in the solution of problems? In the next place, direct interest in the study will increase in proportion to its increasingly closer relations to contemporary life. It cannot be denied that the study of Roman law, whose definitions and statutes grew up upon alien soil and were often framed to meet conditions altogether unknown to us, really at first makes heavy demands upon the student's patience, whose ignorance of concrete facts renders an understanding of the subject difficult. Of course, it is impossible to do without a knowledge of the Roman law and its development, even though the Pandects have ceased to be current. But there will probably be an increasing disinclination to make it the point of departure for the study of all law. The reconstruction of legal studies by the civil code seems to suggest the need of beginning with concrete examples, insisting especially upon viewing the law as the expression of actually existing conditions. Moreover, so far as I can judge, the science of jurisprudence is everywhere engaged in the effort to put the sociological and social-political view into the foreground, as over against the purely formalistic or purely historical view. And the subject will become more and more attractive in proportion as the tendency obtains to recognize the inherent necessity of legal norms and institutions, to find their teleological explanations in the conditions essential to both state and society, and the closer the relations become between the history of law and the history of the state and society, of economics and commerce, of religion and intellectual culture.

2. *The Legal Profession.* In general terms it may be said to be the lawyer's business to serve the people in a legal capacity. Applied to the judge, this means that he should execute the law in the decision of concrete cases; that he should stand for justice as against injustice; that, according to Aristotle, he should be justice incarnate (*ὅλον δίκαιον ἐμψυχον*).

But this implies, first, that his decisions should be based exclusively upon the law; personal likes and dislikes, advantages and disadvantages must not be given a hearing, not even the advantages and disadvantages of his friends, whether they be personal or general, such as his party-friends; the judge is justice incarnate; his interests as an individual have been extinguished. That is what is meant by the ancient symbol of Justice, with her eyes bandaged. The judge must be blind, but not, of course, to facts; the opener and clearer his eyes are to these the better; but he must be blind to everything that might corrupt the purity of his decision, blind to expectations or considerations, hope or fear, sympathy or antipathy.

But this implies, also, that the judge should be justice incarnate, justice as a living and inspired personality. He must by no means be merely a logical mechanism, a kind of legal automaton into which cases are deposited and from which judgments are extracted, but rather a living judicial will determined to realize the idea of justice by means of current law. The necessary presumption always is that the letter of the law was intended by the law-makers to be a means for securing justice for every one. A judge who is not filled with such a determination, who performs his duty like a mere logical apparatus, according to the maxim *Fiat justitia, pereat mundus*, it does not concern me; to whom it is a matter of indifference whether justice or injustice is sent away from his bench grieved if only the logic of the judicial machine be correct—such a judge would not fulfil the ideal, would not be justice personified. To be sure, the judge must not and dare not draw upon his own opinions and desires for "justice," he must learn it from the "law" which he cannot arbitrarily interpret. But he must provide justice; through the common law he must provide justice in particular cases—that is to say, he must bring about that which is right whenever it is possible to do it. This is what is meant by that fine

introductory sentence in the *Corpus juris*: *jus est ars boni et aequi*.

The greatest danger to justice in judicial processes, except bribery, the most terrible evil of all, but which may now be regarded as extirpated in civilized countries, is that the judicial authority will allow itself to be influenced in its decisions by those in political power. And this danger is all the greater, the more it is disguised by the semblance of justice: the government, having made the laws, ought also to control their interpretation and application. This might be proper if the government never aimed at anything else than the enforcement of the laws which it has made. As a matter of fact, however, it always happens that the political "powers that be" assume a certain partisan attitude or, at the least, have a greater liking and sympathy for a particular party, its views and interests, than for the opposition party. But a party's goal is self-preservation, the strengthening and exploiting of its power. It necessarily strives, therefore, to set up that which can be made to serve its end, as the standard of all governmental activity, of administration and even of justice. For a party as such the sum of political wisdom is to injure its enemies and to protect and assist its friends, without, however, making a public acknowledgment of such a principle. There is, therefore, always the danger that a judge, in so far as he is dependent upon those in political power, can become the tool of a party, or, at least, is exposed to the influences of party interests.

In order to meet this danger modern nations have fittingly thrown around the judiciary well-known guarantees of its independence of political power. But the best guarantee will be a strong, self-conscious independence of will on the part of the judiciary itself. The more keenly the judiciary is aware of the importance and responsibility of its high task to serve, not power, but justice—a task long since described by a Roman jurist as a priestly one—the better will the individual judge be protected against temptations to comply with demands that come to him from without, and the less will the authorities dare to make such demands. In times of peace and in the ordinary course of events there will be but few traces of these things in a country where legal rights are secure. But in times of commotion and internal

uneasiness the pressure will become greater, and the judge will have to be strong in the proud consciousness that it is his mission to guard justice and freedom against arbitrariness and power, even against the arbitrariness of legitimate authority. With the law he at the same time defends the real will and basis of such authority against temporary aberrations. *Iustitia fundamentum regnorum.*

The attorney at law, also, has a not unimportant task. He is the attorney for endangered or humiliated justice against injustice. It is a chivalrous sentiment which defends the other, the weaker right against actual or threatened injury or violence. If that be the true conception of an attorney, then he will not realize it who, unmindful of the right or wrong involved, accepts any case with an eye for business only. Certainly, it will not be possible to avoid altogether cases whose merit is doubtful; but cases whose injustice is beyond doubt the more sensitive man will certainly not care to accept; he will resign to others with easier consciences the triumph of a victory in a hopelessly bad cause. Besides, it cannot be denied that the necessity imposed by legal processes in important criminal cases not to leave even the worst causes undefended, and the further necessity imposed upon the official defender to look at everything from the standpoint of his client, bring about a dangerous tendency toward a perversion of the profession, a kind of justification finally even of the most unworthy arts.

Finally, all the leading civil functionaries take the juridical courses at the universities. The civil official's task differs from that of the judge in that he is not called upon to decide judicial questions, but rather to realize purposes, the necessary purposes of the community, which cannot, without danger to the common weal, be left to the efforts of the individual. When this is said the official's form of activity and his position are already indicated. His activity has a freer form than that of a judge; he does not have to apply general legal maxims to particular cases in the hard and fast form of logical reasoning, but, with free teleological consideration, he must promote concrete purposes with the aid of such means as may be at hand. On the other hand, his position is necessarily a more dependent one. The efficiency of an official is measured by his ability to handle

certain definite tasks. Since the task is never an isolated one, but always a part of the general problem, it results that an essential part of an official's usefulness is his ability and willingness to articulate himself as a part of the whole—in other words, subordination. A self-willed, obstreperous official is a useless official. The civil official's entire task implies, also, that the superior officials must be allowed free control over their inferiors who are, in a certain sense, instruments in their hands to be employed according to the measure and peculiarity of their usefulness. If the judge, by reason of his office, cannot be dismissed and cannot be transferred against his will, the official, just because of the nature of his calling, is always at the disposition of his superior.

But the official ought not to become a mere blind tool in the hands of his superior; he, too, should guard his independence of judgment and action if he wishes to retain his personal dignity and his official efficiency. He must, above all else, maintain his liberty of conscience; he must obey, but—in *omnibus licitis et honestis*. If demands are made upon him that are contrary to good morals, then his own conscience must be obeyed, rather than his superior's orders; this attitude cannot be renounced without surrendering his dignity as a man and his moral autonomy. This is true of all officials, without exception, including even the soldier: a blind obedience, blind not only in regard to consequences, but also in regard to moral possibilities, is morally impossible; nobody has the right to deliver his conscience into the keeping of his superior. One's judgment of the expediency of a thing can and must be subordinated to the judgment of a superior if concerted action is to be had, but not one's judgment of what is morally permissible.

Moreover, there is also a limit to the subordination of one's judgment concerning the expediency of things under the control of a superior. And this is true not only in the sense that every official ought to be allowed a sphere for independent judgment: after the purpose or the task has been designated, the selection and application of the means, variously defined according to the branches of the service concerned, are, to a certain extent, left to his decisions; but in the sense that, in the last analysis, it is every individual's duty to measure the task allotted

to him by the final end of all official activity, namely, the public welfare. Should he become convinced that the task assigned him is incompatible with the public welfare it will be his privilege, and it may become a duty, to make appropriate representations of this fact to the superior officer. If he does not succeed either in convincing him of his doubts or in persuading himself of the expediency or possibility of the thing enjoined, if, in short, his representations are not heeded, if he is bluntly called upon to give a blind obedience to orders, then it may happen that his sense of personal dignity may demand the surrender of his office. No one has the right to permit himself to be made the means for carrying out orders which he knows are pernicious; no one has the right to profess the absolutely subaltern view that, as a mere tool, he is not concerned with the results of his work, and that the responsibility rests upon the superior.

All this means that every official, as such, must solve the moral problem of finding the happy mean between necessary subordination and inalienable independence. The man who esteems the latter above all else, for whom subordination to an alien will is nothing less than the spoliation of his personality, is not fit to be an official, and makes a mistake when he selects this avenue of preferment. On the other hand, he who does not know how to guard his independence and consciously permits himself to become a mere automaton, not only loses his own self-respect in an official career, but becomes unworthy of the office as well. As a rule, he will speedily come to look upon his duties in no other light than to be rid of them with the least expenditure of will and energy. His work will become a necessary evil, a mere means for securing a living. And then laziness, official laziness, whose one desire it is to hurry through the hours with a minimum of work, will take hold of him and control him. When that happens the service which he renders is no longer the free service of a free man, but the base service of an underling for pitiful daily wage. But he whose only principle it is to rise by adapting himself to all the desires and wishes of those above him, and thus, with a complete indifference to the general welfare, solely to promote his own personal interests, prostitutes both himself and his office: he is a sycophant.

CHAPTER III

THE MEDICAL FACULTY

1. Medical Studies. The object of medical investigation is life, especially human life, in its widest extent. Primarily, however, it deals with bodily life. Anatomy and physiology are the foundation of the science of life. Closely connected with the science of healthy or normal life is the investigation of disturbances and diseases, together with the knowledge of the means with which to guard life against them, or pathology, therapeutics, and dietetics. But psychical life is also a part of medical science. If it cannot exclude the theory of the diseases of the psychical life and their cure, psycho-pathology and psychiatry, it of course cannot reject the theory of the normal psychic life, or psychology, which, in this domain, is as needful a theoretic presupposition for pathology as physiology is for the theory of the diseases of the body. The abnormal can be described only from the standpoint of the normal. Finally, the social life also demands the attention of this science; diseases of all kinds are social disturbances due to social incongruities, and their control also demands the form of social-hygienic defense. Thus human life in its broadest sense is the object of medical science.

This at once indicates the connection between the medical and philosophical faculties; as a theoretical science medicine is included in the latter, in the department of biology, the science of the phenomena of life in general. If man is a species of terrestrial life, scientific knowledge of him has a specific place within the science of terrestrial life, its forms, development, and conditions. This connection is also indicated in another way: in recent times numerous micro-organisms have been recognized as the causes of disease and destroyers of life. The preservation of life thus becomes a struggle against hostile forms of life, and this imposes upon medicine the exceedingly important duty of

discovering the life-conditions of these hostile forms in order to combat them efficiently. The connection between medicine and botany is an ancient one; the plant-world supplies human life with both food and remedies. Finally, the theoretical knowledge of life processes is based upon physics and chemistry, even then when they cannot entirely be traced back to physical and chemical processes. And by means of psychology the transition to ethics and metaphysics is made.

The study of medicine usually interests its disciples very much. It has two great advantages: the first is the immediate interest which its object arouses; the second, the fact that it is experimental and at once calls for activity on the part of the student himself. To these must be added the further advantage that the course of study is, on the whole, determined by the nature of things; the way is here most definitely outlined, and, therefore, the number of those who get lost or even belated is less here than in other lines.

The nature of the subject imposes the condition that the number of students to a teacher must not be too great. When, as in many other disciplines, it is merely a matter of exposition of a science, the number of hearers is practically unlimited; but when it is a question of close ocular inspection, of learning to practise an art with skill, as in medical instruction generally, but especially in clinics, an unwieldy number of participants nullifies the instruction either for the entire class, or, at least, for the majority. The rapid increase of students has led in this respect to great, occasionally even unbearable, abuses, which the professors, however, with a scarcely comprehensible forbearance have tolerated (or shall we say, preserved, for the sake of the monopoly?), and which have been permitted by the authorities.

In a little brochure by Dr. A. Hartmann (*Die Reform des medicinischen Unterrichts*, 1894), it is stated that the number of students practising (the *Praktikanten*) at the majority of the internal medical clinics of Prussia as well as at the surgical clinics is above 100, and at all of them above 50, a number which not only makes it impossible for the teacher to become acquainted with individuals and prohibits their active participation, but actually prevents one from seeing what is going on.

"At the great clinics, attended by a considerable number of doctors in addition to the students, one can see, of course, that something is happening down below, that a large number of people are busied about a patient; that instruments and bandages are handed about, but the majority see nothing of the operation itself." That the students are compelled to take and pay for such clinics, in order to secure the practitioners' certificates for the examinations, which can be obtained nowhere else, and that they are at the same time compelled to visit other clinics also if they wish to see and learn something, must be described as a really unbearable restriction of the liberty of learning. Either the necessary number of university clinics ought to be provided or students should be allowed to take the required courses where it is possible to do so with profit. There is no dearth of courses. What further abuses are due to this overcrowding, or rather to the insufficient supply of teachers and laboratories for the increasing number of students, how, especially, the medical examinations are suffering on account of it, may be ascertained in the brochure referred to above.

The reason for this condition of things is probably to be found in the fact that the medical faculty, as a part of the university, recognizes its task to be primarily the extension of scientific knowledge, not so much the training of practical physicians. And with this another evil is closely connected: the excessive division of medical instruction into special disciplines. Although very profitable for the encouragement of scientific knowledge as such, this method makes it very difficult for the student to equip himself, within a limited time, as a practical physician who is sufficiently informed in all departments of his work. All this has its reflex influence upon practice. The general practitioner is being crowded out by the specialist, and that not to the patient's advantage, who must pass through the hands of a half-dozen specialists.

2. *The Medical Profession.* Like the study of medicine, its practice applies to the entire life, to the whole man. The physician is concerned not only with diseases, but with man; with the well, to keep them well, and with the sick, to make them well again. But he can do this only when he understands and knows how to treat the entire being, with his psycho-physical consti-

tution. If the object were merely to prescribe a certain medicine, a *specificum*, for a certain disease, the physician's art would be simple enough, as simple, indeed, as that man's conception of it who asked his doctor to name his disease so that he might select the medicine and dose himself from a "hand-book of medicine." Perhaps there are physicians who follow this practice, and perhaps occasionally the wholesale treatment of patients compels them to do so. But the true physician will have a larger conception of his duty. He will regard himself as the confessor in matters concerning health to all those who entrust themselves to his care. Yes, he will regard it as a part of his profession to advise with them about all questions bearing upon life, knowing full well that a human being is an immeasurably complex system in which each part acts upon the whole, the physical upon the psychical and ethical, and the reverse, the ethical and spiritual upon the physical life and its condition. There is, therefore, nothing which is really outside of the sphere of his observation and, from the nature of the case, beyond the point where he can advise and influence. All of which requires discretion which can recognize just how far sympathetic inquiry and advice are permissible. A physician who meets all these requirements, who understands life in general and has an eye for particulars, who, with discretion, has the courage to go to the root of a trouble, and by his character and conduct wins the intimate confidence of his clients, achieves an incomparable position: the ancient proverb still applies to him, φιλόσοφος ἰατρός ἰσόθεος, a philosophical physician is like a benevolent deity.

The medical profession greatly increased its importance and the extent of its activities during the century which has just come to a close. The esteem in which physicians and their services are held is growing, it may perhaps be said, in proportion as the esteem in which the pastor and confessor is held declines. The situation is plainly set forth by the tremendous increase in the number of physicians: while the number of clergymen has scarcely increased since the close of the eighteenth century, at least not even remotely corresponding to the increase of the population, the number of physicians has increased with great rapidity, so that now there is, in Germany, one doctor for every

2000 souls, and in the large cities one for every 1000. There are at present probably numerous houses which clergymen never enter, but, on the other hand, few families which are not repeatedly visited by a physician during the year. It matters not whether this condition of things be traced back to the indifference of a worldly generation to spiritual things in contrast to its concern for the physical life, or to a decreasing confidence in theology and an increasing confidence in medical science and art, the fact itself cannot be doubted that the physician is more and more assuming the place which once belonged to the clergyman, the place of an adviser in all the great and serious affairs of life.

Beyond all doubt, the medical profession thus finds itself confronted by a great task, and with a great opportunity for exerting a wholesome influence. And the conditions are all favorable: medical science enjoys the confidence of the people, at least it does not have to struggle against the *a priori* distrust which now so often confronts the clergyman. And the doctor comes into close touch with people at times when earnest counsel is more readily received than in the days of unimpaired strength and pride. Will the medical profession be more fortunate than the clerical in its war with vice and folly which destroy both intellectual and physical life and health? Will not a united attack on the part of the profession, based upon a knowledge of their causes and effects, and supported by a sincere ethical purpose, be more successful against drunkenness and sexual excesses, the destroying angels of European civilization, than the preachment of morals from pulpits and lecturers' chairs? The usefulness of the latter method is destroyed by contempt and hatred for old and, it is supposed, outlived faith and morality, but medicine is celebrated as scientific and unshackled by useless traditions; what if she should use her great influence to show that what the theologians demanded in the name of God and the philosophers in the name of reason could also be shown to be a demand of biology, one of nature's precepts? And, in this way, it will be possible to find a basis for many another injunction: work, for example, physical activity, is one of the requirements of nature second to none in urgency; on the other hand, temperance and care of the nervous system are also duties to oneself and others. Or, take

the subject of social protection: in contagious diseases we have the most intelligible and urgent sermon upon the unity and solidarity of the race, and the physician is its appointed preacher.

Is the medical profession prepared and willing to undertake this enlarged service? Scarcely as yet in all of its members. It would be entirely alien to those whose conception of the profession fails to rise above the idea that it is merely a business which supports them and may possibly make them rich. The danger is imminent, for the public and legal status of the profession is based upon this conception, and perhaps many celebrated precedents, even at the universities, point in this direction: *Dat Galenus opes, dat Justinianus honores.*

Thus the ancient proverb, indicating, it would seem, that the physician must substitute Mammon as the equivalent for lack of distinction.

But neither has he a right conception of the profession for whom disease is more interesting than the diseased, for whom the patient is more an interesting "case." This also is a danger to which the profession is not a stranger. It may, in fact, be said that medical study really leads one to take such a view. It first puts a dead body into the student's hand and he dissects the "cadaver," learning thereby gradually to be rid of the instinctive awe with which we regard the human form as something sacred and inviolable. Then he is introduced to patients, whom he is taught to look upon in the clinics as objects of investigation and study; they seem to be there not to be cured, but in order to demonstrate interesting "cases," to serve as clinical material, as the technical expression has it. They quite fully serve their purpose, when, a few days later, in the dissecting room they demonstrate the correctness of diagnosis and prognosis. Next, he becomes acquainted with patients in the hospitals, not individual ones, but crowds of strangers who come and go, appear and disappear; and hence the ever-present temptation to treat them as experiments. Kant somewhere refers to a *ius impune occidendi*, which, however, he refuses to apply to the medical profession. I do not know whether Kant coined the phrase, but it evidently implies the public belief that the thing occurs, if not the actual occurrence of the thing

itself. Modern medicine, familiar with vivisection and experiments with living animals, in statistical observations *en masse*, is much more prone than formerly to regard the patient also as an experiment: if he happens to die, it is regrettable, but he must be looked upon as a martyr to science. A recently published book by A. Moll, *Ärztliche Ethik* (1902), supplies material for the further study of this question which one cannot recall without horror.

In opposition to such a conception of the medical profession as the handmaid of "science," a conception which, by the way, can very well go hand in hand with personal ambition and selfishness, it is worth while to insist that it is the doctor's duty to serve his neighbor, his neighbor as an individual. *Primum non nocere*, says the old proverb to the physician; in other words, to seek the interests of science at the risk of danger to the patient is an abuse of confidence which will, in the end, grievously avenge itself upon the whole profession. It is of the utmost importance that the doctor's calling should be exemplified to our young medical students at the universities and hospitals not merely in the form of a great savant and skilful practitioner, but also in the form of a good and sympathetic man.

CHAPTER IV

THE PHILOSOPHICAL FACULTY

1. *The Course of Study.* The name of the philosophical faculty points back to the time when philosophy was conceived as embracing all the sciences: cosmology and physics, logic and metaphysics, ethics and politics. It is the Greek conception, which, in the form of the Aristotelian system, continued to be dominant as late as the eighteenth century. After the temporary rejection of this view by speculative philosophy, which, following Kant, set philosophy as a special kind of science, as knowledge *a priori*, over against all the other sciences, it is again beginning to assert itself in speculation.

This conception assumes that all the sciences really belong to the philosophical faculty; its two great divisions, the mathematical-physical sciences and the philological-historical, include all possible fields of investigation. The three other faculties, looked at from a purely scientific standpoint, appear as off-shoots of "philosophical" sciences that have become independent. Such theoretic knowledge as they possess has, as shown in a previous chapter, its roots in philosophy: theology and jurisprudence in the philological-historical division, and medicine in that of the natural sciences.

The relation described above is reversed when the matter is viewed from the technical point of view, the one which really controls the organization of the university, especially the arrangement of the three higher faculties into independent institutions, equipped as technical schools for the scientific instruction of the clergy, the judiciary, and physicians. In so far as the practical application of knowledge is regarded as the end the philosophical faculty appears to be merely a preparatory school for the three others. This was the controlling view down to the eighteenth century.

During the nineteenth century the fourth faculty also became a special school for the technical training of higher teachers. In consequence, it now has three tasks, which, however, everywhere overlap each other. It is (1) an institution for scientific research in the entire realm of nature and history; (2) a general scientific preparatory school for the students of the other faculties; (3) a scientific professional school for advanced teachers

(1) As an institution for the conservation and development of scientific research from a purely theoretic standpoint the philosophical faculty has risen, during the nineteenth century, from the lowest to the leading place; it is primarily this faculty which gives the German university its character and position in intellectual and scientific circles, and forms the foundation for all the scientific activities of our people. Germany's leading position in the scientific life of European peoples is due to the training for scientific work done by this faculty. This is true primarily in the philological-historical sciences; in his work, *Die Universitäten Sonst und Jetzt*, Döllinger has specially emphasized this point: the peculiar strength of the German university lies in its magnificent organization of a universal study of history. He refers to a long list of works in which foreign peoples find the history of their political and intellectual life, of their institutions and laws, of their literature and art, so investigated and presented by German scholars that they consider the treatment not only new, but entirely satisfactory. But in the field of the mathematical-physical sciences, too, the advantage which the western nations had secured during the seventeenth and eighteenth centuries has been overcome; and in this respect the Germans are second to none, and in a few branches they have the undisputed leadership. This also is particularly due to the work of the philosophical faculties, to those great investigators and teachers through whose agency the seminars and institutes for mathematical, physical, chemical, and biological research have become nurseries of science which to-day are attended by students from all the countries on the globe. Experimental psychology may also be mentioned here as the most recent development, first cultivated by Fechner and Wundt, but now fostered in all lands, especially in the United States.

All these seminars and institutes attract as members and assistants, a staff of young scholars and investigators who are ever ready to furnish the talent for any scientific task, whether in the realm of history or of nature, at home or abroad. At the same time they supply the university teachers of the coming generation: the private docents and professors have uniformly been trained in the institutes and seminars.

Finally, there can be no doubt that it is due to the example of the philosophical faculty that the three higher ones now also regard it as their foremost task to enlarge the boundaries of scientific knowledge. Just as the medical faculty has been enriched by the investigations of natural science, so the theological and juridical faculties have been benefited by philological and historical, as they formerly had been by philosophical investigations.

But, splendid and imposing as this scientific activity is, it cannot be disguised that such an immense extension also has its dangers, both for the individual and for science itself. We have already repeatedly indicated it: the individual, accustomed to the microscopic, to which all research now compels attention, is in danger of losing his ability to look abroad, to take a comprehensive view of things. The constant, intensive attention upon a thousand little and, in themselves, unimportant things, has a tendency to weaken the ability and inclination to entertain great thoughts and general ideas; the philosophical instinct withers away; concentration upon a single point readily leads to narrowness: nothing is seen except that which lies in one's own little field, nothing is esteemed unless it is built according to one's own notion. But for science itself there arises a danger, noticeable especially in the field of philology and history: the mass of facts, of details, of investigations is becoming so immense that no one can survey and comprehend them all, not even master them in a limited field. Our experience is somewhat similar to that of the wizard's disciple: the springs which scientific research has opened—recollect, for example, the publications on the history of economics and education, or the Goethe and Kant philology—flow and flow until historian and history itself are in danger of drowning in the heaving billows. Indeed, it is difficult to predict whether this activity will tend

if carried on for another hundred or five hundred years as in the past one hundred. Will it come to a sudden end, like the scholasticism of the Middle Ages? Will a new generation, thirsting for life and the future, cast off the whole burden, as in the Renaissance the immense burden of scholastic commentaries and questions was thrown away? There are not lacking indications which point to such weariness and dissatisfaction. And what then? Will a period of philosophical speculation follow the period of special research and exactness? Or to what new shores will a new day lure?

(2) The second task of the philosophical faculty was, to be a general scientific preparatory school for the professional courses of the "higher" faculties. Even to-day the philosophical faculty, more than the others, offers its instruction to the students of the other faculties; theologians, jurists, medical students all attend philosophical, historical, mathematical, and natural scientific lectures, as well as those on the history of literature and art, in order to increase their general scientific education and to secure the necessary knowledge for the study of their professions. True, it cannot be denied that in this respect the faculty is diminishing in efficiency, a fact due to its concentration upon its first task. Instruction in philosophy proper, being the least specialistic, is still the best adapted to this task. The other departments have steadily become more specialized. This is especially true of the instruction in philology and mathematics; still open to all students during the eighteenth century, they have since then become more and more exclusive and now exclude nearly everything which is not directly connected with their professional studies; and their students are now almost entirely candidates for the *facultas docendi*, either in the universities or the gymnasia. The same condition obtains in the historical and natural scientific departments in which the instruction also tends more and more to cater to the needs of the specialists; half reluctantly it continues to serve other students too, in natural science the physicians, and in the historical sciences the theologians and jurists.

It is unquestionable that all this tends to restrict general scientific culture. Hence a greater differentiation in the two purposes which are aimed at by instruction is a just demand.

Thus, for example, the instruction of medical students in the natural sciences, such as chemistry or even the biological disciplines, must become independent of the constantly more specialized instruction for chemists, botanists and zoologists, and adapt itself to its particular task. With the demands made upon his time by his professional studies, the young medical student cannot likewise hear the ever growing number of lectures in chemistry, even though he has the greatest need not only of chemical knowledge but also of a moderate ability to conduct simple chemical investigations.

This is true also, though not to the same extent, of the historical disciplines. The jurist must have a knowledge of Roman and German history; the lectures on the history of law presuppose them, because they are now more specialized than ever and cannot undertake to present political and social history as well. The gymnasia supply the fundamentals, but in scholastic form and without real scientific treatment; they assume the instruction to be given in the universities as the sequel to their courses. Now, the universities offer such instruction, but they offer, one is tempted to say, too much of a good thing; there is not enough time to hear German history presented in four or six four-hour lecture courses on the Middle Ages, the Reformation, the modern period, and so on, with still further divisions. The theological students are in the same predicament; without a knowledge of general history they cannot take a single step in their science, for the lectures on the history of the church and dogma presuppose it. They too need historical instruction, but of a more general kind than that offered in the lectures for professional historians. Of course, the lectures try to meet these needs from time to time. It is also true that in this department private reading more readily takes the place of or supplements personal instruction.

As a matter of fact, however, the same need for scientific, though non-specialistic, instruction, is likewise felt by the students of the philosophic faculty itself. The philologist needs and desires a broadening of general culture in the direction of history; or he wishes to take a minor in history, quite a desirable thing for the philologist, both the classical and modern philologist, and quite in the interest of the school; but he also

cannot find the time for a course in history designed for the professional specialist. This is also true of the mathematician and physicist who either desire or must take a certain amount of work in the so-called descriptive natural sciences. In order to meet these various needs, a rather more encyclopedic, but yet scientific course of instruction ought to be developed in addition to the properly professional courses. To a certain extent the administration ought to require certain courses to be given, especially, however, by prescribing them among the duties of newly-appointed professors.

I add a remark here concerning the instruction in philosophy. It also finds itself in a peculiar and difficult situation. It can hardly be reproached with suffering from an excess of specializing; more than any other department, it has retained a universalistic character. And the reason for this lies as much in the aim of philosophical instruction as in the nature of philosophy itself. Its aim may be said to be to guide the student to the acquirement of a comprehensive and rationally grounded view of life and the world, a view which judges the things of life according to their true value, which spans reality with unifying ideas and at the same time reveals the identity between the world of being and the world of values. The teachings of the church accomplished this for former generations by the idea of God, which represented the unity of the real and the good, the *ens realissimum et perfectissimum*. But this comprehensive worldview has been lost to us mainly because of the influence of the tremendous increase of scientific knowledge, or, it might perhaps be better to say, in consequence of the inability of the church to adjust herself aright to the new natural and historical sciences. Philosophy then took theology's place as the constructive science: Leibniz-Wolff, Kant, Hegel, the three great founders of schools, built up their systems. Each one set the old problem before himself: the demonstration of the unity of the real and the good; and each one solved it in his own way by showing how the real is the rational, with this difference, however, that Kant strongly emphasizes the contrast between the given reality and the idea, and transfers the unity of the real and good, to which, however, he clings as an inevitable demand of reason, into the realm of the transcendent. But the three

systems are completely at one in that each, just as formerly the doctrines of the church, claimed to be the final system, built upon a foundation of necessary thought, and supplying the indispensable and universal view of the world. And to a certain extent each one made this claim good.

After forfeiting the respect which the last of these systems, the Hegelian, enjoyed as the finally revealed universal reason, philosophy has lost this position. Anarchy has since then reigned within her domain, and respect for her soon gave way to that bitter contempt with which deluded ones, after their eyes have been opened, are wont to revenge themselves. A small degree of confidence has gradually been restored. But the after-effects of that bankruptcy can still be felt everywhere. This is especially true in the sense that there is now no thoroughgoing philosophical explanation of the world, such as we used to have, at least within certain limits; the latest speculations are all at cross-purposes with each other. A large part of the public still maintains a sceptical distrust, and looks upon philosophy as a really impossible thing and upon the several systems as ephemeral phenomena which will by and by destroy each other. In still other circles there exists at least the most decided distrust of academic philosophy; since Schopenhauer many regard a university philosopher's incapacity and dishonesty as fully established facts.

It not seldom happens that a rather credulous faith in all kinds of "systems" which commend themselves as "unconventional" goes hand in hand with this distrust of "professional" philosophy. Yes, a certain mania for peculiar and extravagant ideas is manifest in many quarters, and even rises into a perfect passion for the paradoxical. The loudest and shrillest opposition to everything which was formerly esteemed is certain to attract the largest following. Think of *Rembrandt als Erzieher*, of Max Nordau, Tolstoi, and Nietzsche, and of the large army of faithful followers and adepts they at once gathered, who satisfied the desire for universal ideas about things and life with the wildest "transvaluations" of everything heretofore acknowledged; and the harsher the opposition, the better, for it at least gets rid of the old values. And even if logic should also go by the board, still better; that old scold

has been in control long enough, and has all too often and all too rudely offended "that tender soul, imagination."

To the external difficulties and obstacles due to these conditions must be added certain features of internal weakness which exercise a depressing influence upon academic instruction in philosophy and prevent it from occupying the position it had at the time of Wolff and Kant. Philosophical instruction is less unified and organized than any other; it possesses the smallest number of recognized truths; there is no agreement as to methods and aims; scarcely a single point of common assurance. Everybody goes his own way, unmindful of the others, proud that he has no predecessor, and walks in entirely new paths. Plato's assertion in *Theaetetus* (180 B. C.) still applies: "they pop up of themselves, each one with an inspiration, God only knows from whence, and each one believing that the others do not know anything at all." And even if one simply succeeds in the renaming of things, that is basis enough for the claim to be the founder of a new "system." I know very well that all this is most closely connected with the nature of philosophy itself; personality is here of more significance than in other sciences. But a barren passion for originality also plays a not insignificant part.

The consequence is that a great many people despair of an earnest handling of so uncertain a subject; the majority of the medical and juridical students do without any philosophical instruction at all; and many of the two other faculties do not come into anything more than a superficial contact with it. And the further consequence is that those who have been academically trained are lacking in firm principles and views concerning all ultimate universal problems, yes, are even unable properly to understand these problems. All of which, in turn, comes to light no less in an untenable scepticism than in inability to resist any possible sudden gust of paradoxical fancies.

It is impossible for any one to correct the evil. But we can, at least, be alert to the unsatisfactoriness of the situation. We can still hope and expect that an approximately uniform philosophical vocabulary and viewpoint will gradually evolve from the Babylonian confusion, which will be able to unify the results of all previous philosophical development, fully enriched by the

new discoveries of the special sciences. If at the same time there could be less of that barren passion for originality and more regard for the great minds of the past, together with an inclination to keep in touch with the achievements of that past, on the part of teachers of philosophy, the results of philosophical instruction and the philosophical culture of the academic world would be more valuable than they are at present.

In V. A. Huber's history of the English universities (II, 508) the following remarkable assertion occurs: Even though English philosophy is excluded from the highest heights of speculation, still, "as harmoniously developed common sense" it promotes "practically efficient observation and comprehension of particulars, and, in certain directions, also the combination of a number of like particulars, to a much higher degree than our mind, self-dependent, often oppressed and intimidated that it is, or lost in sentimentality, phantasms, vanity or ignorance, is capable of doing."

(3) The third task of the philosophical faculty is to prepare teachers for the higher schools. Here we meet the peculiarity that practically no special arrangements are made for this purpose in the course of instruction; preparation to become a teacher is simply synonymous with the equipment of a scholar. The philologists and historians, mathematicians and natural scientists conduct their department lectures and exercises as if to continue scientific investigations was the future destiny of all of their students. There is now scarcely a trace in university instruction reminding one that the great majority of their students are destined primarily to teach the elements of the sciences; only in the lectures on pedagogy and in the occasional pedagogical seminars are there any hints of this calling.

This fact has not gone unnoticed; the administration has come face to face with it time and again: the discovery was made that the teachers who came from the universities were not prepared to be teachers, but scholars. And even though the administration made no objection to such scholarly equipment, but rather welcomed thorough specialistic preparation, it could not remain indifferent when young teachers came to the schools with nothing but specialistic training in a narrow field. Again and again, therefore, it emphasized the necessity, not so much

for a technical pedagogical education, which could be obtained in actual practice, but rather for a comprehensive general education, a scientific familiarity with a whole series of related disciplines, not merely in order to meet the demands of instruction in the school, but also because it felt that the teacher could not perform his function as an educator without general philosophical culture. It was with this in view that the examinations were designed, in order that the needs of the profession should be emphasized even in the course of study.

Thus we have here also an antinomy between the scholarly and the professional training, similar to that in the higher faculties, only that it is here much more acute, because the philosophical faculty pays less attention than the others to the needs of the student's future calling. It is a real antinomy; the demands of both sides are justifiable. They could be set over against each other after the fashion of the Kantian scheme and their claims confirmed in the following way.

The Philosophical Faculty: Its task is instruction in the sciences, not as they are adapted to the demands of a profession, but for the sake of the sciences themselves. To change this would be to destroy the fundamental character of the German university. But even from the standpoint of the future teacher of higher institutions of learning this faculty's duty is clearly prescribed; a mere encyclopedic education, such as, for example, the pupils of a normal school receive, would not do justice to the ideal in view. The gymnasium teacher's task is to give the youths entrusted to his charge a scientific education, of course in a propaedeutic and elementary form; he should strive to kindle in them the scientific feeling, the love for knowledge, and should put those in the upper classes, at least in the way of independent work and personal investigation: the philological-historical as well as the mathematical-physical instruction in the upper classes is intended to lead the student to the independent seeing, grasping, and judging of things. How could he do this if he were not himself a scholar, if his own interest in research work were not keenly alive? And how could it be unless he himself were engaged in some kind of scientific work or at least had once attempted it?

The Administration: The primary necessity for a school is

teachers who regard themselves as the trainers of the youthful mind. Even upon external grounds a school cannot have scientific specialists in each department, like a university. But even if the supply of such were plentiful, they could not be used. A learned philologist, no matter how well he might have done some bit of scientific work, who was perfectly at home among manuscripts and editions, who could count upon his fingers all the changes of all the vowels of the English language during all the centuries, and that in all the dialects would not therefore be a qualified teacher; indeed, if he did not have certain other qualifications, if he were not the master of the living language, and were not at home with the authors used in the school, he could be of no service to that school no matter how much he might be worth as a scholar. As a matter of fact, a teacher must be more than a technical scientist; an individual may actually have rendered splendid and useful service in some domain of investigation without, on that account, being fit to teach; there is needed, in addition, and apart from technical ability, a certain breadth and mobility of culture and of interests. If a narrow and purely specialistic training at the university prevents him from attaining these and if, possibly contrary to his own disposition, his environment and the claims that are considered valid there, immediately force him into research work, and if, in addition, he is carried away with the idea that such work is the most respectable he can do, and infinitely above the instruction and education of boys, then he is actually ruined so far as the teaching profession is concerned.

So argue the representatives of these two positions. And it must be admitted that both are right. It is certainly not the proper preparation for a teacher, when a young man at the university immediately buries himself in some scientific work even when it happens *invita Minerva*, and then finally, after exerting himself for several semesters with the linguistics of some remote epoch or the metrics of an obscure author, turns out a dissertation *taliter qualiter*. On the other hand, mere learning without any attempt at independent scientific work, a passive sort of study directed simply toward the acquirement of knowledge with a view to the examinations, would be a no less

unsatisfactory preparation for the teacher of a secondary school. And hence the demand will be to satisfy the claims of both parties.

Is that impossible? There are those who think so. A university professor recently proposed, and his proposition was widely discussed, that special professorships of "school sciences". (*Schulwissenschaften*) should be established at the universities, so that there would be two kinds of university instructors: the first would be entrusted with the duty of scientific research and the training of future scholars, the second would have as their task the equipment of teachers for the higher schools with the necessary professional knowledge. The suggestion presupposes the impossibility of meeting the claims outlined above, and would, if followed, destroy our entire educational system. It would mean the destruction of the German university. Two kinds of professors in the same faculty would be as impossible as two kinds of students. The philosophical faculty would then be divided into an academic institution and into a pedagogical seminary or normal school, and a classification of students into future scientists or teachers would have to be made at the very beginning of their studies. And this would mean, at the same time, the abolition of the gymnasial teachers and the gymnasia as the Germans conceive them: the teachers, by surrendering their claims to be classed among the scholars, would at once sink to the grade of mere school teachers; and the German gymnasia would cease to be scientific schools and would become, even more than they are now, institutions in which to prepare for the examinations and the certificates.

If this method, the method of despair, cannot be adopted, then we must continue to hold that the education of the teacher and that of the scientist are not exclusive of each other; it is possible, because necessary, at the same time to do independent scientific work and to acquire that universal culture without which no one can do justice to the teacher's calling. The solution of the difficulty can also be demonstrated by examples. There have been and are, not a few men who were efficient teachers and at the same time did important scientific service. I mention Hermann Bonitz *in star agnūm*. To be sure, emi-

nence is rare; such a complete solution of the difficulty will not occur often. However, this ideal solution is the goal at which all must aim. It is important that this be clearly seen and that all who have an interest in the matter should coöperate in its achievement.

And, first, as to the students themselves. The aim should be to devote oneself to research in a given direction without losing one's sense of the general; and, on the other hand, to attend to generals and yet not neglect to bend all of one's energies upon some particular thing. It is necessary both to beware of aimless generalization and of a too limited specialization. It is not easy to strike the happy medium, and harder in the philosophical faculty than in the others, owing to the extensiveness of the studies, but it is possible. Moreover, it may also be asserted that for all scientific work on a large scale both extension and intension are needed.

And, then, as to the university instructors. It will be their part always to keep both of these requirements before their hearers and pupils. Those who all too soon are inclined to busy themselves with one particular problem, will be shown the necessity of a broad acquaintance with the whole subject before they attempt the solution of such a problem; and, on the other hand, those who are inclined to generalize will be impressed with the necessity for concentration. At the same time it will be their duty, not to overlook the requirement of scholastic instruction in their lectures and exercises, or even to treat it as of minor importance, to which a learned insolence here and there has shown an inclination. To a greater extent than is done to-day the university can and must meet the demand for general scientific instruction. And just here, I repeat it, an intelligent administration will be able to accomplish something by inducing, for example, younger men to give lectures for a wider circle than professional scholars. And I wish also to point out, again, that the appointment of prominent scholars among the gymnasial teachers to professorships at the universities is commendable because they so thoroughly understand a teacher's needs, and they could be of assistance to students by making methods of teaching, let us say in physics, geography, or history, the subject for treatment in the exercise-courses.

namely, as to the examiners. They should be able to appreciate and recognize both kinds of work, both classes of students. There are persons who are more adapted for a broad, general scientific culture, bright minds who interest themselves in everything, can comprehend and appropriate everything; and there is a talent that is better fitted for real research work. Both may be capable men in their way, both may become excellent teachers. For this very reason the examinations should recognize and be just to all. As in the final examinations at the gymnasium allowances are made according to departments, so they might be made here according to these different inclinations. If one has submitted an especially able piece of scientific work, perhaps in the form of an unusually fine dissertation, it would be an injustice, because of gaps here and there in the range of his knowledge, to treat him worse than another whose studies have been of wider extent, or even than one who has skilfully prepared himself for the examinations and examiners. But it would also be unreasonable to pay attention only to absorption in one thing, and that something which has value only for the specialist, without taking into consideration at all the man's general culture. It is the duty of the examiners to see each one's strong points, a duty, it is true, that has been made exceedingly difficult by the division of the examination into a perfectly endless multiplicity of separate tests. And each examiner is inclined to make his own judgment final and to see in a probable lessening of his requirements because of conspicuous work in some other department a depreciation of the dignity of his own science.

2. *The Teaching Profession.* It is the task, of the higher schools (the *Gelehrtschule*) to educate the leading classes of the people by means of propaedeutic scientific instruction, which is preparatory to the real scientific instruction of the universities.

The higher schools are distinguished from the general common schools particularly in two points: by instruction in foreign languages and a propaedeutic scientific course in mathematics and the natural sciences. The study of foreign languages and literatures is a direct introduction to the intellectual life beyond the limits of one's own nationality, thereby

making one more cosmopolitan. The mass of mankind participate in the life of humanity only indirectly through national life and speech; but he who masters foreign languages and literatures belongs directly to that wider culture by means of which a people really becomes an integral part of humanity. This is especially true, also, of the knowledge of ancient languages. The roots of our entire life lie in the Graeco-Roman world, and a complete historical comprehension of our life is therefore impossible without a knowledge of those languages. And as the languages are the tools with which a scientific knowledge of the world of history is acquired, so mathematics is needed for the mastery of the natural sciences. And these, in turn, form the foundation, on the one hand, for the technical sciences and, on the other, for philosophy; by means of the natural sciences the powers of nature are subjected to the human will and the form and order of nature are observed; we first get our bearings in the universe through the mathematical and natural sciences.

Hence the importance of the instruction given in the higher schools, where the foundation for all real scientific culture is laid; and here, as everywhere, everything depends upon the fact that the foundation be laid securely. He who acquires at school, over and above a certain amount of knowledge and dexterity in its application, the habit of honest and thorough work, correct and clear thinking, as well as regard for the truth and love of knowledge, has an equipment which will make any scientific or practical career easy.

In real significance and value, therefore, the teaching profession is second to none of the learned professions, although it is not the first in public esteem. For a long time, up to the beginning of the nineteenth century, it was looked upon as merely preparatory to the clerical office; the teacher aimed to exchange his position as quickly as possible for the more highly esteemed and endowed pastoral office. And to-day also, although the teacher's position has been much improved, it still cannot meet all the reasonable demands connected with it. For a time, with the profession's achievement of independence, it seemed as if there would be a full recognition of its social importance. This was during the time when the new-humanistic philology had assumed the leadership of the intellectual life; when

universal enthusiasm for antiquity and the study of the ancient languages with a brilliant halo, which, to some extent, was reflected upon the teachers also; particularly Greek seemed to be an initiation into a higher, truer humanity, and its teachers appeared as priests of humanity. Since the middle of the century this light has gradually grown paler; the enthusiasm has cooled; indeed there has arisen an aversion to the humanities, which had certainly not been cultivated everywhere in the humanistic spirit, and which had also suffered from the fact that unreasonable requirements drove everybody into the gymnasial classes.

At the same time other causes also operated to degrade the profession. The administration constantly increased the emphasis upon the official character of the teacher as against his freedom as a scientist. The complete control of instruction by the state, the increased emphasis placed upon ability to teach in the examination for teachers, as shown by the personnel of the commission in charge of the examinations, the decreasing value placed upon scholarly work when leading positions are filled, and the introduction of a two-years' practical preparatory course in the gymnasial seminaries, all this has increased the distance between the scholar and the teacher and has tended to incorporate the teaching profession into the civil service. The reserve-officer also illustrates this tendency. But as a part of the civil service itself the teacher's position will always be a modest one. In the eyes of the public it will always seem to be more imposing to control public affairs as a military or civil functionary, or, as the representative of government, to command men, than to instruct and train the growing youth, no matter how much reflection upon the real merits of the case may declare that education of the youthful mind for the good and true and beautiful is the finer, deeper, more spiritual, more important, and even more efficacious agency. It is particularly difficult for our era, dazzled as it is by power, correctly to estimate intellectual influence.

Finally, external conditions have a bad effect upon the profession. I refer to the increasing disproportion between the number of instructors who never rise above the lower and middle classes and those who teach the higher classes, resulting

from the enormous increase in the lower and middle classes at the metropolitan institutions; to the establishment of numerous *Realschulen* with six-year courses, which are really only a kind of higher common-school, but are looked upon as a part of the higher school system and supplied with academically trained teachers. The result is that the gymnasial teacher is actually losing the character of a scientific instructor and is sinking back into the old position of a tutor. There can be no doubt that a teacher's position at an old gymnasium, where the higher classes dominated, and where it was possible for every capable individual, while still in middle life, to assume charge of the courses preparatory to the university or to be promoted to a director's place, was something different from such a position at an institution where there are twelve or more overcrowded lower and middle classes for every three of the higher one. That teachers famous in the scientific world should, because of such conditions, continue in the elementary branches until they are past fifty, is really an altogether intolerable state of affairs. Besides, in a teaching faculty having thirty or forty members a single individual's position is not of much importance; he is merely one subordinate wheel in a great machine.

We cannot disguise the fact that this condition of things is a source of danger to the educational interests of our people. If the popular depreciation of the teacher's position continues until it is only selected as a last resort, our higher schools will suffer as an educational force. The government can do something, though not all that is needful, to counteract this tendency. With the means at its disposal it can, particularly, emphasize the equal importance of the teacher with other civil officials. That is just what the profession is now so energetically fighting for, that is why it so decidedly demands that it be put upon an equality with the judiciary in the matter of salaries. In so doing it not only defends its own interests, but also the interests of the school and higher education in general against the all too superficial conception which ascribes a greater honor to the juridical offices, as if they alone were concerned with the sovereign functions of state, and seeks to publish this higher honor to the world by means of higher salaries. In reply it should be said that, since the educational system has been as-

sumed by the state, the teacher also is concerned with one of the great interests of state, that of the *jus educandi*, an interest which, in genuine dignity, is not inferior to the *jus puniendi et coercendi*. The administration can also counteract this accumulation of classes by a division of the institutions themselves. If it will not do this for the sake of the teacher, it will have to do it for the sake of the pupil. This is true, also, of the division of overcrowded classes. Cheapness must not be the controlling idea in matters of this kind. In any case, whatever the state saves in professorships is paid for two and three times over in the form of fees for tutoring; and teacher, pupil, and parents are chagrined into the bargain. Finally, the question ought likewise to be considered whether or not the six-course institutions, whose advancement the administration properly has so much at heart, ought to be classed among the intermediate schools, to which they really belong, with all that would imply in the appointment of teachers. To be sure, it would be more flattering to the social ambition of the public to regard them as "higher" schools.

The remedy will largely depend upon the teachers themselves. Just because they have been, for the time being, compelled to emphasize the externals, it will be all the more necessary for them to take care of their inner dignity. Two things must be taken into consideration in this connection.

First, they must maintain their position in the scientific world. The teacher's social position in Germany will always primarily depend upon his position in the scientific world. That there are men among the teachers of our higher schools whose names are mentioned with respect in scientific circles is their long-time glory and has given the profession its present position. This glory they must not forfeit. It is not needful that every teacher should publish something scholarly, that is not possible, not even desirable, but that some of them should participate in scientific work is a matter of vital moment to the profession. Its character and reputation depend upon it. The situation constantly becomes more difficult, for the claims of both science and the schoolroom are growing more insistent. Notwithstanding, however, not a few of our teachers have succeeded in taking an active part in scientific investigations, and

have done so, frequently, amid limiting and oppressive conditions. That this should continue is a matter of life and death for the gymnasias also: the German high school does not want to be and should not be a mere institution for learning and reciting lessons, but a place where scientific work is done and instruction in scientific work is given; it has always been its pride to be, in its own way, and for a smaller circle, in some degree, what the university is in a larger way and for a wider circle. •

But if this is to continue it will be incumbent upon the administration not to oppress the teacher with an overplus of routine duty. The number of hours required of him ought not to be so great that, after making due allowance for the constantly increasing burdens of work in and out of the schoolroom, the teacher finds no time for cultivating his special science and achieving something in it in case he has ability and inclination to do so. And it would be most desirable if, relieved from active duty, ambitious students among the teachers could be enabled to devote themselves for a considerable period wholly to the completion of some scientific labor, and if, in addition, means were supplied for travelling, so that the philologist, who also has archaeological interests, could take a journey into the countries of antiquity, or into the regions where the languages in which he is interested are spoken, in order directly to refresh himself with and become absorbed in the life and growth of the language and spirit of the people. Nor should the natural scientist, the geographer, the historian, be excluded from the opportunity for such a scientific journey in the pursuit of his studies. At a number of American universities the excellent custom of the "Sabbatical year" is in vogue. Every seventh year is a free-year for the professors. Something similar might be done for our gymnasial teachers with happy results. And if the pensioning of the teacher were postponed to a correspondingly later date, it would not even require any financial sacrifices to accomplish it. Our large and wealthy cities should take a pride in taking the initiative in things like this.

Secondly, they should themselves respect the profession. I fear that there are not lacking members of the profession itself who look upon it as of little significance, and are actually ashamed of it. They look up to other callings as more respec-

table than theirs, if for no other reason than that they are envious of the position, rank, order, title, distinction or other advantage which they offer. A nobler pride would suggest that the teacher's reward is not such that it can or ought to be acknowledged and published abroad by means like these.

The immediate danger lies in regarding the teacher's work as of less value than a scientific career; the gymnasial teacher's profession is felt to be a kind of degrading, compulsory service, to which necessity only compels a man to accommodate himself, while natural endowment and desire really predestined him for genuine scientific work and the university. Concerning such an under-valuation of the profession it should be said that, like all other honest work, scientific work has its merit and glory, but intrinsically it is certainly not superior to the work of an educator and teacher, either in importance or efficiency, nor yet because of the demands which it makes upon those who perform it. Yes, it may even be said that to mold a living soul by actual contact with it during its most susceptible years is a freer and more respectable art than that of writing down dumb letters on dead paper, or being a scientific hod-carrier, and filling books and magazines with quickly forgotten articles which perhaps no one reads but a reluctant fellow scientist.

I would like to advise every teacher whose professional duty prevents him from writing articles and books, and who resents this as prejudicial to his dignity and efficiency, to turn to the conclusion of the *Phaedrus*, which reads as if it had actually been written for the comfort of such men. I refer to the remark which Plato attributes to Thamos, an ancient Egyptian king, when the god Theutus praises his invention of the alphabet as a wonderful feat of wisdom and memory. Although the king admires the invention, he will neither use an art himself, nor introduce it to his people, which can only paint empty ideas upon paper, like dumb and lifeless pictures, which cannot defend themselves when attacked, cannot answer questions, and address any one at random. The living language, however, discriminatingly written into the learner's mind in conversation, is abundantly able to help itself, knows full well when to speak and when to be silent as the occasion demands. Changing the figure, he compares the seed sown through a reed with

ink like the seed sown in jest on feast days in the garden of Adonis, which springs up quickly and rankly in eight days only to wither away as quickly, with the seed which the farmer, who is anxious for a crop, sows according to all the rules of agriculture in proper and properly prepared ground, satisfied if he can reap a harvest in eight months.

And if the teacher learns by further experience that not everything which is sown in love and patience comes up and ripens, he should read and take comfort in the parable of the sower in the gospels, for whom also everything sown did not come up, but some fell upon stony ground, and some among thorns, and some by the wayside, while some fell upon good ground and brought forth an hundred fold.

CHAPTER V

THE UNITY OF THE UNIVERSITY

IN Germany the old unity of four faculties in one university has been preserved. It is now the general conviction that it was a happy dispensation, or shall we rather say, an exhibition of genuine wisdom to conserve the ancient form, even in the face of all kinds of doubt and opposition. It shall be the aim of this closing chapter to point out the advantages accruing to both science and life by this arrangement.

The view, if it has ever been held, is groundless which supposes that all the sciences are comprehended in the classification of the four faculties, or that this classification is equivalent to a classification of the sciences. I have repeatedly pointed out that the classification of the faculties was not made from the viewpoint of a theoretic division of the sciences, but developed out of social necessities and historical conditions: society needed, and still needs, scientifically trained clergymen, judges, physicians, and teachers. Thus regarded, the university is nothing more than a loose co-ordination of professional schools.

But certain intrinsic conditions transform this outward co-ordination into an organic unity. And this internal unity is exhibited by the fact that the four faculties have the same object as well for scientific study as for subsequent professional practice, namely, man and human life. The technological universities have as their object of study, and the technical professions as their object of practice, external nature.

The university also embraces these, in one division of the philosophical faculty, but, in so far as we regard that faculty as a *potiori* a normal school the focus of the studies of all the faculties is man, his historical and natural life. And the four

academic professions, the clergy, judiciary and officials, physicians, and teachers, are co-ordinated into a unity by the fact that the preservation and regulation, the material and intellectual improvement of human life is their common task. And therefore it is right and beneficial that those whose studies have a common center of interest, who in later life meet each other everywhere, and whose professional pursuits bring them into contact in many ways, should, even at the university, learn to know and respect each other, and feel that their interests are mutual. If the reader will pardon me I will enlarge upon this point for just a moment.

It is important, in the first place, that the teachers of all the faculties should be organized into a homogeneous body. By this means the mere outward environment gives one a daily impression of the unity of the sciences; the daily meeting is an incentive to seek encouragement and assistance in intellectual intercourse. The theologian meets the philosopher, the philologist, the historian, and the physicist; and as long as these sciences thus present themselves to him in bodily form it will be impossible for him to ignore them; he finds himself compelled to come to satisfactory understanding with them. There can be no doubt that the character of Protestant theology is, to a large extent, due to this circumstance. It is the inherent tendency of that theology to reduce religion and science to an essential unity, always to harmonize scientific knowledge with the religious consciousness. Because Catholic theology is bred in the seminaries, and exists to itself even at the universities, it has more unity of system but also less influence upon the science and culture of the day. But Protestant theology, influenced by all the sciences, also exerts a reflex influence upon them, as in the case of Schleiermacher, or Baur, or Hase. It is by no means an unimportant matter for the German universities that most of them have a Protestant theological faculty. Such an estrangement of science from religion as is oftener found in Catholic countries, whose universities generally have no theological faculties at all, is not easily possible in the world of Protestantism. As an illustration, compare the French Renaissance with the German. The former was an irreligious, the latter an essentially religious movement. Both

Wolff and Kant were, in a certain sense, reformers of theology also; and Fichte, Schelling and Hegel were even more so.

Similar generalizations will also apply to the other sciences. The philosopher comes into constant contact with students of nature and history; they mutually influence one another; he is constantly made to feel that he must bring his ideas into harmony with the concretely real; the entire recent development of philosophy in Germany is due to this. On the other hand, he awakens and encourages in the scientist a desire for universal and ultimate truths; and the predilection of German science for philosophy is without doubt due to this constant personal contact with the philosopher and theologian. The jurist, also, comes into daily contact with the historian, or the economist, and the physician with the physicist, chemist, and biologist; the mere presence of those others is a challenge to look beyond the limits of his own science and to make comparisons. The friendship which united von Savigny, the founder of historical jurisprudence, and J. Grimm, the founder of German philology, may be taken as a symbol of the unity that exists in Germany between the juridical and historical sciences. And the same unity exists between medicine and physics.

It ought also to be kept in mind how frequently the transition is made from one science to another, not infrequently even with a total disregard of the faculty boundaries: Lotze, the philosopher, was a physician and docent of medicine at Leipzig before he was called to the chair of philosophy at Göttingen; Wundt also began with medicine, and Fechner was a life long professor of physics; Helmholtz, physicist and physiologist, had completed his medical course and was a military surgeon before he became a professor of physiology, and then of physics; Mommsen, the historian, originally a jurist, was professor of law before he became professor of history; Zeller, the historian of philosophy, originally a theologian, was a professor of theology before he became a member of the philosophical faculty. All these men, moreover, laid the foundation for such dual capacity during their university course.

This leads to the further observation, that this intercourse

of the faculties is of no less significance to the students than to the teachers. It is true that the university does not possess the unity of a school, it is merely an association of independent higher schools whose courses are, in a general way, co-ordinate. There is, however, a great deal of overlapping. A German student certainly will not readily leave his university without having heard lectures outside of his own faculty, at least, not without having done so occasionally. The philosophical faculty especially is still the most general one. All the faculties still meet each other at the lectures on philosophy, history, natural science, and economy; the most frequent attendants are the theologians, who are still probably actuated by the most comprehensive desire for information; the medical and law students are not so often seen there, but often enough to make a complete disregard of those lectures the exception to the rule. But the reverse is also true; the members of the philosophical faculties hear lectures in the others according to inclination and purpose. The historian visits juridical or ecclesiastical history lectures, and the physicist takes in the medical courses, etc. This doubtless facilitates the transfer from one faculty to another, which, therefore, often takes place. The unity of the university, by inviting inspection of other departments, makes it possible to recognize and correct mistakes in the choice of courses and professions before it is too late.

The result of this interchange of lectures is a not less important social and scientific intercourse among the students. There is probably not a single student who does not enjoy more or less intimate association with members of the other faculties. In this respect also the fraternities are not without significance, for here it is that jurists and philologists, philosophers, theologians, and doctors, became intimately acquainted with each other. Many a lasting friendship is cemented here. This is not an unimportant matter; he who has enjoyed the friendship of but a single member of another profession at the university is thereby placed in a different attitude to that entire profession; the foundation for appreciation and confidence is thereby laid: *Ars non habet osorem, nisi ignorantem*. Thus the unity of university education contributes, in a high degree, to impart to the academically educated classes the feeling of

unity and solidarity, the feeling of an aristocracy of intellect, an aristocracy which can hold its own against both birth and wealth. Excluding no one who has the ability to secure admission to the academic world, the university, as formerly the clergy, represents both the unity and the intellectual leadership of the people.

But the unity of the university faculties is important not only for their internal life, it is of consequence also for the external position and value of the *universitas docentium et discipulorum*. Above all, their influence upon public life is incomparably greater than could be the influence of single and scattered professional schools, no matter how efficient their work might be. Nobody knew anything about the several French legal and medical schools except those immediately concerned in them; in contrast, the German universities, even the smaller ones, like Jena, Kiel, Erlangen, and Königsberg, are peculiar and independent centers of intellectual life, which have their own sphere and control it, and whose names are not unknown, even in foreign countries. Here it was the philosophical, there the theological or medical faculty, which gave the entire body at least for a time a European reputation. Nor is this without significance for the individual consciousness; as a professor of the University of Jena or Königsberg a scientist is known and introduced everywhere, he belongs to a world with a unique historical life, with its own traditions, which control and support him, which raise his ideals and increase his courage. And the student has the same experience just as soon as he matriculates. In so doing he enters a community which exerts an influence upon the nation's entire life and which represents a part of the history of our people.

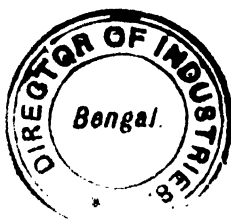
The significance of the German universities for our political life also rests upon this circumstance. They are not a distinct political body, nor are they represented in the German parliament; they do not even stand for any particular political policy, all parties are represented among them, but they nevertheless exert an influence in politics. As the largest independent corporations in the country, they produce a kind of *esprit de corps* which maintains and asserts itself with the greatest energy against all influence either from above or

below. The nineteenth century saw repeated examples of it. Isolated professional schools have no individual college spirit, the society is too limited, the point of view too narrow, and dependency too great; only at a university can there be that development of ideas in common which, as the seal of the corporation, gives it the distinctive character and the self-preservative instinct of an organism.

In closing, one other point remains to be mentioned: the unity of all the German universities among themselves. Looked at as a whole the German universities are a world to themselves; a continuous exchange of students, and also of docents, takes place among them, like the blood currents in a living body. Foreign universities, especially those of the English type, know nothing of this phenomenon. Just as their students continue, during the entire course, in their respective colleges, so the graduates remain with their universities; the latter, at least, *ceteris paribus*, give the preference to their own graduates. This is so seldom the case in Germany that one could rather say that there is a controlling tendency to import talent from the ranks of rival institutions. Each university seeks to attract the best possible talent from the entire field, in order thereby to increase its own drawing powers. This was due, in part, to Germany's territorial division; there has always been a noble emulation among the German governments to increase the efficiency of their respective universities to the best of their ability and without regard to an applicant's place of birth, provided he is German. There can be no doubt that this system is superior to the system of inbreeding. And even though the exchange is occasionally too rapid, it has, in a general way, the favorable result that each university shares in the life of all the others and is constantly nourished with new blood and new ideas.

A quotation from Savigny will, in conclusion, appropriately express what the German people possess in their universities. In his essay on the worth and value of the German universities, already referred to, he declares that their value does not consist "in the accomplished learning of their teachers, nor in the potential scholarship of their students; to claim this as their distinction might, not infrequently, cover the claimant

himself with confusion. But, their distinctive value lies in the fact that they supply an environment in which every capable teaching talent can be properly developed, and every susceptibility of the student can be satisfied—an environment to which advancing science easily and quickly finds entrance and in which the higher vocation of distinguished men is readily recognized, and where even the poorer lives of more limited natures receive an increased appreciation of existence. We may justly be proud of the possession of such an environment, and all who are familiar with our universities will agree that such praise is only the literal truth, and no exaggeration.”



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APPENDIX

THE UNIVERSITIES OF THE PRESENT GERMAN EMPIRE, AND THE YEAR OF THEIR ESTABLISHMENT

Heidelberg, 1385.	Würzburg, 1582.
* Köln, 1388-1794.	Giessen, 1607.
Erfurt, 1392-1816.	* Paderborn, 1614-1808.
Leipzig, 1409.	† Strassburg, 1621.
Rostock, 1419.	* Rinteln, 1621-1809.
Greifswald, 1456.	* Altdorf, 1622-1807.
Freiburg, 1457.	* Osnabrück, 1630-1633.
* Ingolstadt, 1472-1800.	* Bamberg, 1648-1803.
* Trier, 1473-1798.	* Duisburg, 1655-1818.
* Mainz, 1477-1798.	Kiel, 1665.●
Tübingen, 1477.	Halle, 1694.
* Wittenberg, 1502-1817.	‡ Breslau, 1702.
* Frankfurt, a. O., 1506-1810.	* Fulda, 1734-1809.
Marburg, 1527.	Göttingen, 1737.
Königsberg, 1544.	Erlangen, 1743.
* Dillingen, 1549-1804.	Münster, 1730.
Jena, 1558.	Berlin, 1809.
** Braunsberg, 1568.	Bonn, 1818.
* Helmstädt, 1576-1809.	München, 1826.
<p>* Discontinued. ** Reestablished 1818. † Reestablished 1872. ‡ Reestablished 1811.</p>	

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